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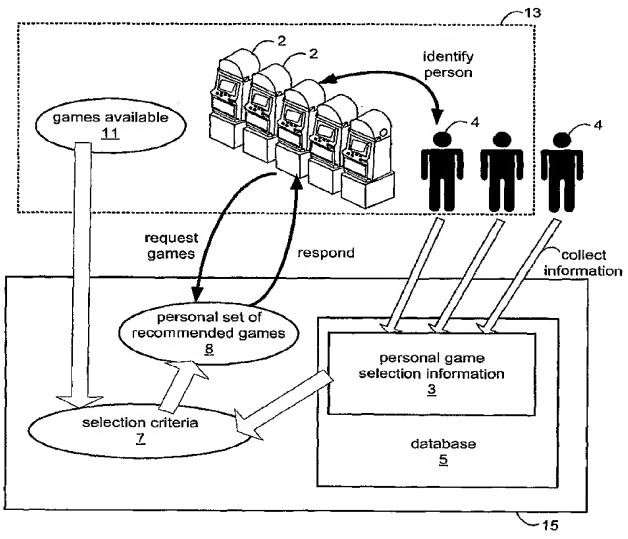
(54) Title: CUSTOMIZABLE AND PERSONAL GAME OFFERINGS FOR USE WITH A GAMING MACHINE



(57) Abstract: Described herein are systems and methods that offer a personalized set of recommended games to an individual. The systems and methods collect personal game selection information for a person, such as demographic information and/or previous gaming experience data. The collected information is then analyzed and used to select a set of recommended games from all possible games (e.g., offered by a gaming establishment) that the person is likely to enjoy. The set of recommended games is then offered to the person when they are identified at or near a gaming machine or when the person provides the personal game selection information to a gaming machine.

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CUSTOMIZABLE AND PERSONAL GAME OFFERINGS FOR USE WITH A GAMING MACHINE

FIELD OF THE INVENTION

[0001] This invention relates to systems and methods for offering games on gaming machines, such as those used in casinos and gaming establishments. More particularly, the present invention relates to systems and methods that allow a gaming machine to offer a customized set of games to a person.

BACKGROUND OF THE INVENTION

[0002] Processor-based gaming machines are now the norm in the gaming industry. Their popularity benefits from the vast array of games that a digital architecture can offer. Many gaming machines now employ computing architectures developed for personal computers, which enables the operation of countless games, including games of advanced complexity, graphics and story design.

[0003] Some machines permit play of multiple games on a single machine. Notably, the set of games presented by a conventional gaming machine remains the same for all players. But not all players enjoy the same games.

[0004] Casinos often offer a large suite of games to increase patronage and ensure that a person can play games that they enjoy. Finding a new or different game that an individual likes amongst the multitude of options is difficult. When there are hundreds of games and only a handful that the person may prefer, it is far more common for the person to encounter distasteful games than pleasant ones. Casinos and other gaming establishments want patrons to enjoy their gaming experience, and would rather have someone playing a personally fulfilling game than spending time on games that they do not enjoy. Accordingly, it is desirable to provide a tailored set of games to a person that the person is likely to enjoy. Such tailored game offerings do not currently exist.

SUMMARY OF THE INVENTION

[0005] The present invention provides systems and methods that offer a personalized set of games to an individual at a gaming machine. To do so, the systems and methods collect personal information for a person, such as demographic information and/or previous gaming experience data. The collected information is then analyzed and used to select a set of recommended games, from numerous games offered by a gaming establishment, that a person corresponding to the personal information is likely to enjoy. The set of recommended games is then offered to the

person when they are identified at or near a gaming machine or when the person provides the personal game selection information to a gaming machine.

[0006] In one aspect, the present invention relates to a method for offering a set of recommended games to a person near a gaming machine. The method includes storing personal game selection information that is useful for selecting a game from multiple games for the person. The method also includes selecting the set of recommended games, from a set of available games, for the person using the personal game selection information. The method further includes displaying the set of recommended games to the person on a video display associated with the gaming machine.

[0007] In another aspect, the present invention relates to a method for selecting a set of recommended games for a person. This method includes assembling game meta-data for a set of available games, the game meta-data referring to data that is useful for characterizing the game. The method also includes obtaining personal game selection information for the person related to the game meta-data. The method further includes selecting a set of recommended games, from the set of available games, for the person using the personal game selection information and using the game meta-data for the set of available games.

[0008] In yet another aspect, the present invention relates to a server for use with a gaming machine network. The server includes a memory designed or configured to store a) a set of available games, b) personal game selection information for a person that is useful for selecting a set of recommended games from the set of available games for the person, and c) a software application that selects the set of recommended games from the set of available games using the personal game selection information. The server also includes a logic device configured to execute the software application that selects the set of recommended games from the multiple games for the person using the personal game selection information. The server further includes a communications interface for transmitting a list of the set of recommended games to an external device.

[0009] In yet another aspect, the present invention relates to a gaming machine that includes a controller, communications interface, video device, and a digital memory. The controller is designed or configured to control one or more games played on the gaming machine and to request a set of recommended games for a person from a remote server. The communications interface is configured to communicate with the

remote server. The video device is configured to display video data and display the set of recommended games. The memory is designed or configured to store preferential game software that instructs the controller to request the set of recommended games for the person from the remote server when the person is near the gaming machine.

[0010] Another aspect of the invention pertains to computer program products including a machine-readable medium on which are stored program instructions for implementing any of the methods described above. Any of the methods of this invention may be represented as program instructions and/or data structures, databases, etc. that can be provided on such computer readable media.

[0011] These and other features of the present invention will be presented in more detail in the following detailed description of the invention and the associated figures.

BRIEF DESCRIPTION OF THE DRAWINGS

[0012] FIG. 1 shows an illustrative overview of personalized game recommendation and collection of personal game selection information according to the present invention.

[0013] FIG. 2 is a perspective drawing of an exemplary gaming machine in accordance with a specific embodiment of the invention.

[0014] FIG. 3 illustrates a simplified gaming machine system in accordance with an embodiment of the invention.

[0015] FIGS. 4A-4B respectively illustrate an exemplary player tracking card and a block diagram of representative card components for use with a specific embodiment of the present invention.

[0016] FIG. 4C illustrates an exemplary magnetic stripe player tracking card configured for use in connection with another specific embodiment of the present invention.

[0017] FIG. 5 illustrates a method that selects a set of recommended games for a person in accordance with one embodiment of the present invention.

[0018] FIG. 6 illustrates a method that offers a set of recommended games to a person in accordance with one embodiment of the present invention.

[0019] FIG. 7 illustrates a weighting algorithm suitable for selecting games in accordance with a specific embodiment of the present invention.

[0020] FIG. 8A is a block diagram of a user interface for selecting and modifying recommended games in accordance with one embodiment of the present invention.

[0021] FIG. 8B is a block diagram of a user interface for modifying a player preference account in accordance with another embodiment of the present invention.

[0022] FIG. 9 is a block diagram of a server connected to a number of local and wide area networks in accordance with one embodiment of the present invention.

[0023] FIG. 10 is a block diagram of a server connected to a gaming machine, kiosk and room access in accordance with another embodiment of the present invention.

[0024] FIG. 11 is a method depicting an implementation of recommended games on a preference account server for one embodiment of the present invention.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0025] The present invention will now be described in detail with reference to a few preferred embodiments thereof as illustrated in the accompanying drawings. In the following description, numerous specific details are set forth in order to provide a thorough understanding of the present invention. It will be apparent, however, to one skilled in the art, that the present invention may be practiced without some or all of these specific details. In other instances, well known process steps and/or structures have not been described in detail in order to not unnecessarily obscure the present invention.

[0026] Game presentation tailoring as described herein improves gaming machine and player interaction by selecting and providing a set of recommended games to a person that the person should like, based on personal information for the person. FIG. 1 shows an illustrative overview 1 of this personalized game recommendation process.

[0027] Personalized game provision includes collecting personal game selection information 3 for one or more people 4. As the term is used herein, personal game selection information refers to any data that is useful in predicting what game(s) a person may like. In one embodiment, personal game selection information includes personal information and/or historical game play data. Personal information may include demographic information, interests and/or personal preferences, such as favorite movies and actors, etc. For example, people in demographic groups that appreciate games related to television shows from a past era such as the 1960s (e.g., "I Love Lucy") are often different than people that favor science fiction games (e.g., "Star Wars"). Age may then be used to indicate a proximity to the former, while science fiction interest acquired in a personal survey may be used to predict enjoyment

of the latter. Other personal information may be used, and is described in further detail below. Historical game play data may include any information associated with the previous game interaction, such as what games a person played in the past, when they played, and betting history. For example, frequent play on one game design or betting format (e.g., multiple paylines) may lead to a recommendation of another game with a similar game design or betting format.

[0028] The personal game selection information 3 may come from a variety of sources, such as prior game interaction, demographic sources, marketing information, combinations thereof, etc. Marketing information obtained by businesses associated with a casino represents one source of personal information. Such marketing information is commonly provided with tour groups, trade shows (e.g., a Science Fiction or computer industry convention attending Las Vegas for a few days), and other temporary visitors to a city or casino. In addition, gaming information may be obtained by a personal questionnaire. The questionnaire may be acquired via paper, telephone, web-based. A person when signing up for a room at a casino/hotel, for example, may fill out a paper questionnaire. Player tracking systems represent a continuous source for prior game interaction and demographic information. The player tracking systems gather personal information when the person signs up for the system, and collect historical game play data, over time, at gaming machines that the person plays. These systems allow a player to be identified at a machine, track games played by the player, and gather any information related to game interaction. Players agree to have their game play tracked by a central system in exchange for perceived added value in the form of rewards or other services offered by a casino. Additional techniques to collect personal game selection information are described below.

[0029] The personal game selection information 3 is stored in a database or memory 5, either locally at a gaming establishment 13 or on a remote server 15. The database or game selection server 15 stores: personal information for each person 4, personal game selection information 3, the selection criteria 7, and/or the set of recommended games 8 for each person 4. The personal game selection information 3 is updated, as desired, as the system obtains new information about person 4.

[0030] Data mining systems and methods 7 then filter the personal game selection 3 information and select a set of recommended games 8 for a person. The recommended games 8 refer to games that a person is likely to enjoy based on

personal game selection information for that person. Different people enjoy different games, and techniques described herein tailor game offerings towards individuals based a) on their personal and stored information, and b) data mining criteria established to convert personal game selection information 3 into a set of recommended games 8. This filtering process reduces a total number of games offered by a gaming establishment to a lesser number that is likely to interest a person.

[0031] In one embodiment, an automated and computer-implemented data mining analysis 7 filters personal game selection information 3 using a) personal information and b) selection criteria for the personal information. The automated filter outputs a set of recommended games 8 for each person, given only a list of available games, personal information, and a selection criterion. The automated filter thus provides techniques and algorithms that mine personal game selection data for hundreds or thousands of people 4 and provides high throughput production of sets and individualized results and recommended games 8 for each person.

[0032] The present invention contemplates a wide range of suitable selection criteria for filtering personal game selection information 3. In one embodiment, the game selection process applies a weight for each personal criterion that affects how relevant the criterion is relative to the other information. For example, a weighting function that includes weights based on a personal survey or prior game play permits control of selection criteria by adjusting the weights (e.g., from 0 to 1 or from 0 to 100), e.g., as the person plays a game more, a weight for that specific game and/or a weight for its genre increases. The weight also permit a system designer to choose what personal information is used in the selection process (giving weights of '0' or low weight devalues its corresponding personal information), and what value it is given relative to other personal information. Other techniques for selecting games using personal game selection information are contemplated.

[0033] In one embodiment, the data mining and game selection process is configurable. First, a system designer may determine which personal game selection information is used. Second, the system designer also determines the relative weight or value of each bit of personal information. When the personal information and/or criterion weights are altered, the selection process usually produces a different set of recommended games 8 for a person. This permits a system designer to sculpt the game selection process. Casinos and other gaming establishments 13 value their own

expertise in patronage. Configurability in the selection process permits a casino to control and tailor individualized game offerings to its patrons, to promote various games or improve service according to their own standards and values of customer patronage. In general, configurability allows any system designer or gaming establishment to controllably mine personal data to generate a set of recommended games 8 for each person 4 and each gaming establishment.

[0034] As time passes, a designer may change the data mining criteria and/or weights. Again, this usually produces a different set of recommended games. Thus, a casino or other gaming establishment may alter individualized game offerings over time by manipulating the criteria. This allows the casino to select new sets of games for an individual, or encourage certain games for business purposes (e.g., a new game they are promoting). The personal game selection information 3 may also be updated for a person (as they play more games and more information is recorded), which may also produce a new set of recommended games 8 for that person, given the same selection criteria.

[0035] When a person 4 nears a gaming machine 2, machine 2 recognizes the person (or otherwise links them with an identity stored in a database for their set of recommended games 8) and associates the person 4 with a set of recommended games 8 that has been selected for that person. Several techniques for recognizing a person at a gaming machine are described in further detail below.

[0036] Selecting subsets of games offered by gaming establishment 13 allows the establishment to offer a large suite of games for all types of people - but custom fit game offerings to individual patrons.

[0037] A set of recommended games 8 may be organized into one or more logical sets. Each logical set groups games into a common theme, subject or idea. A 'descriptor' is used herein to characterize and/or label a logical set of games and thematically links an organized set of games with an easily understood term. For example, one or more games may be grouped into logical sets characterized by the labels: 'Games Played', 'Science Fiction', 'Poker Games', 'Payline Games', 'Recommended Games', 'New Games', 'Recently Played', 'Played Most', etc. Additional logical groups and descriptors are provided below. Other logical groups are permissible, are a matter of design choice and convenience, and the present invention is not limited to or by any particular groupings or labels. As the term is used

herein, a 'set' may refer to a set of games or a subset of any set, and the two terms are interchangeable as used herein. It is also worth noting that a game may be in grouped into multiple logical sets; for example, 'Star Trek' may be grouped into: a 'Science Fiction' logical set, a 'Television Show' logical set, and/or a 'Recently Played' logical set.

[0038] The logical sets may be displayed by gaming machine 2, e.g., on a menu (see FIG. 8A). The sets may be initially displayed by their descriptors. In this case, a player chooses a descriptor (e.g., using a touch screen on the gaming machine) to access a set of games for that descriptor (and player). After the person selects a game within the set, gaming machine 2 then presents the selected game to the player.

[0039] Multiple sets of recommended games 8 can be presented. The sets can be displayed simultaneously - or by their descriptors. This allows display of the sets themselves to vary depending on the capabilities of a device displaying the sets, player preference, or even the context they are being displayed in.

[0040] The present invention also permits a person to have input on the selection process. In one embodiment, a gaming machine provides a graphical user interface that allows a player to input information related to recommended games and sets. For example, a player may input the number of games he/she wants in a set - one player might wish a gaming machine to present the last 5 Games Played, while another may wish to see the last 10 Games Played. Or one player may wish for games to stay in a Recently Played set for 30 days, while another may wish for games to stay in that set for only 1 week. User controlled options may also include the types of games to include or exclude from a logical set, and what descriptors to present when they arrive at a gaming machine. The player may also add or remove games to or from the lists of recommended games 8. An exemplary user interface for controlling a set of recommended games 8 is described below with respect to FIG. 8A.

[0041] Thus, the set of recommended games 8 may be affected by: the player, the selection criteria, a gaming establishment, and/or the gaming machine based on a subset of games available thereon. In one embodiment, remote server 15 downloads the set of recommended games 8, as determined by a gaming establishment and selection process, to a gaming machine 2. This downloaded set may change over time. For instance, a gaming establishment 13 may promote a new game that player has

never seen before. If the player does not like the one or more games in the set of recommended games 8, the player may change the set via a user interface.

[0042] As a result of the list of recommended games, a player might discover a new favorite game that they previously did not know about, play the game a lot, play more often in the responsible casino 13, and have a generally more pleasant experience with casino gaming and that casino 13. On a mass consumer scale, offering recommended games may also increase player enjoyment and participation, increase player exposure to different games, and speed adoption of new games.

[0043] Many possible games, including traditional casino games, video slot games, video poker, digitized mechanical slot games, video black jack, video keno, video pachinko, lottery games and other games of chance as well as bonus and progressive games are suitable for use with this invention. The gaming industry includes a number of game manufacturers that each provides a suite of games. For example, International Game Technology (IGT) of Reno, NV offers a wide variety of entertaining and thematic games (over 100 games) suitable for use with the present invention. A casino may offer games from one or multiple game manufacturers and select subsets from the total list as desired. In general, the present invention is not limited to a specific game played on a gaming machine 2. In addition, a set of recommended games may also include bonus games and progressive games linked together by one or more descriptors, e.g., 'Bonus Games' or 'Progressive Games'.

[0044] The personalized game recommendation process of FIG. 1 is also flexible and extendable. When a designer wants to add or amend criteria for selecting games, they can do so, and thereby create a new set of recommended games and/or logical set for each person 4 associated with a database 5 or gaming establishment 13. The designer or casino may also designate a game as recommended for all players. One example of this is a 'Recommended Games' logical set, which recommends games to a player based on the types of games they usually play (e.g., Science Fiction, games related to movie characters, etc.) or games favored by a casino.

[0045] In a specific embodiment, information collection, game filtering and selection, personal identification, and individualized offering are all automated. This requires little personalized management by the gaming establishment for each person 4. In this case, casinos may implement the present invention with minimal overhead for a large number of patrons using automated processes.

[0046] The invention is also dynamic in: a) selection criteria, b) personal game selection information, and c) and games offered. Notably, no static set of recommended games needs to be maintained in database 5 for each person 4, just the person's personal game selection information 3 and the selection criteria 7. Machine 2 may request a set of recommended games 8, and receive the set 8 from remote server 15, all in real time. Recommended sets are then generated in real time based on games that are currently available to a casino, either on a gaming machine 2 and/or on a server 15. In this case, the set of recommended games 8 may vary each time the gaming machine 2 requests games. Many gaming machines permit games to be downloaded using a network connection from a centralized server. This permits currently available games offered by a gaming machine to change in real-time, without the need for manual reconfiguration of each gaming machine whenever the casino installs a new game offered by a game manufacturer.

[0047] As the term is used herein, a gaming establishment 13 refers to any business or organization that operates at least one gaming machine on its premises and/or offers gaming machine services to potential customers. Exemplary businesses include gaming machine services providers, casinos, hotels, airports, restaurants, nightclubs, grocery stores, gas stations and convenience stores. A gaming machine services provider may include a gaming machine manufacturer or a business that offers gaming machine services (such as progressive pools or financial services for ticket redemption). Portable gaming instruments such as player tracking cards and paper tickets are gaining popularity; many such portable gaming instruments identify the person who carries them. The same portable gaming instrument may be offered and redeemed by one or multiple establishments. For example, a portable gaming instrument may have been generated at one property, redeemed at that property, or redeemed at another property, such as a second casino. While the present invention will be discussed primarily with respect to casinos, it is understood that the present invention is well-suited for use by any gaming establishment.

[0048] While the present invention will primarily be discussed with respect to gaming machines found in casinos and the like, the present invention is well-suited for use with any device that a player is capable of playing games on. For example, this invention can be applied to gaming machines with Internet access or remote access to a player tracking system, thin clients playing games on a server, and/or a hybrid

environment. In one embodiment, the invention applies to any environment where an identified player interacts with a device that is capable of playing multiple games.

[0049] The invention thus tailors a gaming experience to each person. When a casino offers hundreds of games, this reduces the number of games presented to a player to a manageable level, and games that are most likely to be enjoyed.

[0050] Turning to FIG. 2, an exemplary video gaming machine 2 is shown. Machine 2 includes a main cabinet 14, which generally surrounds the machine interior (not shown) and is viewable by users. The main cabinet includes a main door 18 on the front of the machine, which opens to provide access to the interior of the machine. Attached to the main door are player-input switches or buttons 32, a coin acceptor 28, and a bill validator 30, a coin tray 38, and a belly glass 40. Viewable through the main door is a video display device 34 and an information panel 36. The main display device 34 may include one of more of: a cathode ray tube, flat-panel LCD, a transparent LCD, plasma/LED display, an OLED device or other conventional electronically controlled video display device.

[0051] The gaming machine 2 includes a top box 16, which sits on top of the main cabinet 14. A second display device 42 may be provided in the top box 16. Display device 42 may also include one of more of: a cathode ray tube, flat-panel LCD, a transparent LCD, plasma/LED display, an OLED device or other conventional electronically controlled video display device.

[0052] Typically, after a player initiates a game on gaming machine 2, the main display device 34 and the second display device 42 visually display a game presentation, possibly including one or more bonus games, and controlled by a main processor (see FIG. 10). The video component of a game presentation may include a sequence of frames refreshed at a sufficient rate on at least one of the displays, 34 and/or 42, such that it appears as a continuous presentation to a player playing the game on gaming machine 2.

[0053] Information panel 36 may be a back-lit, silk screened glass panel with lettering to indicate general game information including, for example, the denomination of bills accepted by the gaming machine (e.g., $1, $20, and $100). Bill validator 30, player-input switches 32, video display device 34, and information panel are devices used to play a game on game machine 2. A main processor, housed inside main cabinet 14, controls these devices. During game play, information regarding the

operation of one or more of these devices may be captured by gaming machine 2 as part of a game history on the gaming machine.

[0054] In the example shown in FIG. 2, top box 16 houses a number of devices, which may be used to input player tracking information or other player identification information into the gaming machine 2, including bill validator 30 which may read bar-coded tickets 20, key pad 22, fluorescent display 17, camera 44 and card reader 24 for reading magnetic striped cards or smart cards. Camera 44 may be mounted in top box 16 and used to record images of a person near the gaming machine. Key pad 22, fluorescent display 17 and card reader 24 may be used to enter and display player tracking information. In addition, other input devices besides those described above may be used to enter player identification information including a finger print recording device or a retina scanner.

[0055] In addition to the devices described above, top box 16 may contain different or additional devices than those shown in the FIG. 2. For example, the top box may contain a bonus wheel or a back-lit silk screened panel, which may be used to add bonus features to a game being played on gaming machine 2. During a game, these devices are controlled and powered, in part, by circuitry (not shown) housed within main cabinet 14.

[0056] Understand that gaming machine 2 is but one example from a wide range of gaming machine designs on which the present invention may be implemented. For example, not all suitable gaming machines have top boxes or player tracking features. Those of skill in the art will understand that the present invention, as described below, can be deployed on most any gaming machine now available or hereafter developed.

[0057] Returning to the example of FIG. 2, when a user selects a gaming machine 2, the gaming machine identifies the person and offers a list of recommended games. The person then selects a game. In some cases, the gaming machine offers a preview game to the player. Alternatively, a person inserts cash or credit through the coin acceptor 28 or bill validator 30. Bill validator may also accept a printed ticket voucher, which may be accepted by the bill validator 30 as indicia of credit. Once the gaming machine has accepted cash or credit, or the preview game accepted, game play may commence on the gaming machine. Typically, a player may use all or part of the cash entered or credit into the gaming machine to make a wager on game play. During the course of a game, a player may be required to make a number of decisions that

affect the outcome of the game. For example, a player may vary his or her wager, select a prize, or make game-time decisions that affect game play. These choices may be selected using the player-input switches 32, a touch screen associated with main video display screen 34 or using some other device which enables a player to input information into the gaming machine including a key pad, a touch screen, a mouse, a joy stick, a microphone and a track ball.

[0058] During certain game events, gaming machine 2 may display visual and auditory effects that can be perceived by a player. These effects add to the entertainment and excitement of a game, which makes a player more likely to continue playing. Auditory effects include various sounds that are projected by the speakers 21. Visual effects include flashing lights, strobing lights or other patterns displayed from lights on the gaming machine 2 or from lights behind the belly glass 40. After the player has completed a game, the player may receive game tokens from coin tray 38 or a ticket 20 from printer 30, which may be used for further games or to redeem a prize. Further, a player may receive a ticket 20 for food, merchandise, or games from printer 30. This information may also be incorporated into game history information or saved in a textual record of game history.

[0059] Many possible games, including video slot games, video poker, video pachinko, video black jack and video keno, may be provided with gaming machines of this invention. In general, the invention may be applied to any type of video game implemented on a gaming machine supporting video game presentations. Gaming machine 2 also provides multi-game capabilities where more than one type of game may be played on the gaming machine. For instance on gaming machine 2, a player may select video black jack using the input buttons 32, make a wager, initiate a game and view a video black jack presentation on the display screen 34 and then select a video slot game, make a wager, initiate a game and view a video slot presentation.

[0060] Typically, using a master gaming controller, the gaming machine controls various combinations of devices that allow a player to play a game on the gaming machine and also encourage game play on the gaming machine. For example, a game played on a gaming machine usually requires a player to input money or indicia of credit into the gaming machine, indicate a wager amount, and initiate a game play. These steps require the gaming machine to control input devices, including bill validators and coin acceptors, to accept money into the gaming machine and recognize

user inputs from devices, including touch screens and button pads, to determine the wager amount and initiate game play.

[0061] After game play has been initiated, the gaming machine determines a game outcome, presents the game outcome to the player and may dispense an award of some type depending on the outcome of the game. A game outcome presentation may utilize many different visual and audio components such as flashing lights, music, sounds and graphics.

[0062] The present invention is well suited for server-based gaming in which a centralized server manages the personalized game recommendation process.

[0063] FIG. 3 illustrates a gaming machine system 100 in accordance with an embodiment of the invention. System 100 includes at least one gaming machine 2 at a particular location, remote gaming machines 103 at another location, a bus 104, and a recommended games server 105. The gaming machines 2, 103 and server 105 communicate with each other electronically via bus 104, which may include any conventional data transmission line. Each gaming machine 2, 103 allows a player to play a game, and dispenses rewards, monetary or otherwise, as appropriate. The configuration of system 100 encompasses embodiments in which server 105 controls the operation of gaming machines 2, 103. The system 100 also encompasses embodiments in which gaming machines 2, 103 are each stand-alone units capable of operating play of their games largely without server 105. Like gaming machine 2, machines 103 are configured to allow a player to play a game. The gaming machines 103 are shown as separate from gaming machine 2 simply to illustrate the fact that various embodiments of the invention can be utilized within systems 100 that have multiple networked gaming machines.

[0064] The present invention identifies a person at a gaming machine. In one embodiment, identification uses biometric recognition. Biometrics uses biological information to establish and verify identity of a person. The basic idea behind biometrics is that each person's body contains unique properties that can be used to distinguish the person from others. 'Biometric data' refers to data used to identify a person based on a person's physical trait or behavioral characteristics. 'Biometric identification' refers to the process of identifying of a person based on his or her biometric data. Fingerprint identification is one example of biometric identification, and can be accomplished with an optical scanner and fingerprint software installed on

a gaming machine. Facial recognition, retina scans, hand-written signatures, voice patterns and/or palm prints are all forms of biometric identification that are suitable for use herein. The first two may use camera 44 on gaming machine 2 of FIG. 2, and both allow identification without the user performing any initiating action. Other forms of biometric authentication may also be used.

[0065] In addition to biometrics, a person may carry something that identifies them to a gaming machine. For example, also included in system 100 of FIG. 3 is a portable gaming instrument 106 that can be carried by players. Portable gaming instrument 106 refers to any device used to convey value in a gaming establishment and/or identify a player. This may include a paper ticket or voucher, a smart card or debit card, for example. For example, portable instrument 106 can be a known player tracking card or paper ticket that stores information that identifies the person carrying a portable gaming instrument 106. In such a case, gaming machine 2 can be equipped with a card reader that allows players to insert their portable device into gaming machine 2 to be read before or during game play. Exemplary printed credit devices include printed-paper tickets and printed plastic cards. Plastic cards including a magnetic strip that stores information are also suitable for use herein. Some casinos issue player identification or player tracking cards that furnish a person awards for frequent patronage. Before beginning play, a player presents the card to a magnetic card reader that communicates with the gaming machine. The reader detects the card, and software on the gaming machine or network notes the card value and person. The credit device is often portable. A person may carry the portable gaming instrument until redemption at a gaming machine, cash-out station or another location in a gaming establishment that redeems portable credit devices. Although the remaining discussion will primarily be described with respect to player tracking cards, any suitable portable instrument 106 that communicates identity of a person to a gaming machine is suitable for use herein.

[0066] The portable gaming instrument 106 may uniquely or generally identify the person carrying the instrument 106. Unique identification exclusively refers to that person. General identification broadly identifies the person as belonging to a group of people. For example, a paper ticket may be given to each member of a Science Fiction convention; in this case, the personal information on the ticket only includes Science

Fiction information for the person (and maybe other information such as a hotel for the convention).

[0067] FIGs. 4A-4C illustrate exemplary player tracking cards capable of identifying a person at a gaming machine. FIGS. 4A-4B illustrate an exemplary "smart" player tracking card 125 having contacts 135 on its outer surface, as well as internal components including a microprocessor 120 and memory 130 (FIG. 4B). The microprocessor 120 and memory 130 are in electronic communication, allowing microprocessor 120 to store information in, and retrieve information from, memory 130. Microprocessor 120 is also electrically connected to contacts 135, allowing it to interface with external devices and systems.

[0068] In the operation of a gaming machine 2 utilizing a smart card 125, a person inserts their tracking card 125 into a reader at gaming machine 2. The microprocessor 120 then retrieves information from the memory 130 and provides it to the gaming machine 2. The information can include such items as the person's identification, or a number related to the person's identification suitable for identifying the person in a database. Receipt of this information prompts the gaming machine 2 to display a set of recommended games for the person, to or call server 105 to retrieve and transmit such information before display on the gaming machine.

[0069] FIG. 4C illustrates an exemplary magnetic stripe tracking card 140. In contrast to the smart tracking card 125, magnetic card 140 does not contain a microprocessor 120. Instead, its magnetic stripe 150 stores a relatively small amount of information, such as an identification number for the card or an identification number for a person that the card was given to. A card reader in the gaming machine can read information on stripe. Operation of a gaming machine system 100 utilizing magnetic stripe tracking cards 140 often employs server 105 to provide information that cannot be stored on the card 140. Commonly, the gaming machine 2 automatically retrieves an identification number stored on the card 140, and sends it to server 105. Server 105 then checks the identification number or the person's identity to obtain a set of recommended games for the person. In some cases, the server may also determine whether the user of that particular card 140 is entitled to sample or preview play and, if so, initiates sample play on gaming machine 2.

[0070] Having discussed exemplary gaming machines, server-based systems, techniques for identifying a person at a gaming machine, and portable devices,

methods for selecting and offering recommended games will now be expanded upon. FIG. 5 illustrates a flow chart 60 for selecting a set of recommended games for a person in accordance with one embodiment of the present invention.

[0071] Flow chart 60 begins by assembling game meta-data for a set of available games (62). The game meta-data refers to a category or data related to a game that is useful for characterizing the game. The game meta-data is particularly useful to map the game and its characteristics. In a specific embodiment, the meta-data may include a key-word description of content in the game. For example, a 'Star Wars' game may include the following meta-data: {Science Fiction; movie; licensed; live video; dual screen presentation; multiple paylines; bonus game included, progressive jackpot included; etc.}. The meta-data may also include logical information, such as a game type (e.g., reels or cards), number of paylines, wager denominations, payout percentages and characteristics (e.g., frequency and size of wins, overall volatility), genre, whether the game is licensed, betting information such as wager amounts and/or payout tables, whether the game allows the player to buy features (e.g. chance to trigger a bonus, chance to win a progressive jackpot) whether the game video includes any notable actors, whether the game audio includes any notable music, the types of extended features the game offers (e.g., free spin features, bonus features that allow the player to select from a set of prizes, double-or-nothing features, etc. Often, the meta-data does not directly pertain to game play, but describes characteristic aspects of the game. For example, a "Wheel of Fortune" game may include the following meta-data: {TV Show; licensed; live video; dual screen presentation; multiple paylines; wheel bonus; game show; puzzle solving; 2D or 3D graphics; celebrities; Vanna White; Pat Sajak; Merv Griffin (designer of original show); second screen bonus; etc.

[0072] Assembling game meta-data may occur when the recommendation system is first established, and each time a new game is obtained or introduced. For each game, the meta-data is assessed and recorded. The meta-data may also be mapped into categories. For example, a 'wager' category may include the following meta-data: 'bet amount', 'number of paylines', 'bonus game', 'progressive betting?' etc.

[0073] Notably, meta-data for the available games is not static and may change over time. Thus, when a casino wishes to change how they characterize their games and patronage, step 62 may be repeated as desired. Meta-data may be added, removed,

completely overhauled, etc. Each change may produce a different set of games for each person.

[0074] Game selection software is then configured to select recommended games from a set of available games (e.g., to a casino) using the personal game selection information for a person (64). In one embodiment, the recommended game selection software includes a) selection criteria that use the meta-data from 62 and b) personal game selection information for multiple people. The selection criteria permit designers and casinos to tailor the selection process by adding weights and controlling the relative contributions of different meta-data. For example, game genre (one particular meta-data) may be given a weight of 1 on a scale from 0 to 1, while number of paylines (another particular meta-data) receives a weight of 0.1. The weights thus affect the relative relevance of meta-data according to individual personal game selection information for any person. In the example, a personal survey may have indicated a strong preference to game genres, but indifference towards the number of paylines in a game. Further description of the game selection software and rules engine design is provided below.

[0075] Personal game selection information for one or more people is then obtained (66). As mentioned above, personal information may come from demographic sources, marketing information, one or more casinos and gaming establishments, prior game interaction, combinations thereof, etc. In one embodiment, personal game selection information includes personal information and/or historical game play data. Such personal information may include a person's age, current residence, country of origin, favorite TV show, favorite actor, favorite movie, preferred movie genres (e.g., horror, comedy, etc.), preferred sport, favorite sports team, hobbies and interests (e.g., hunting or snowboarding), preferred vacation destination, education level, annual income, sex (M/F), occupation, marital status, number of children, favorite game, preferred game type (multiple paylines, etc.), preferred card game, favorite video game, favorite slot game, preferred traditional reel game, favorite poker game, social preferences and recreations, preferred music, and favorite musician, for example. This list only includes one of each of the items (e.g., a favorite sport), it is understood that a person may have multiple inputs for each item (e.g., preferred sports), such as three preferred sports or three favorite movies or

actors. This list is not meant to be exhaustive and other personal information is suitable for use herein.

[0076] Personal game selection information may be obtained by a personal questionnaire filled out by a person, e.g., when signing up for a room at a casino/hotel. Such a questionnaire may be designed to produce information useful for the present invention, or not. For example, the personal questionnaire may include questions that the hotel uses for quality service. Useful information from a questionnaire may include one or more of the items listed above.

[0077] Historical game play data may include any data and information relating to the interaction between a person and a gaming machine, such as information gained via a player tracking card. Player tracking systems are one source for historical game play information. By inserting their player tracking card into a gaming machine, the person allows the gaming machine to identify the person and start collecting information related to interaction between the player and gaming machine. Such information may include wager denominations, wagering patterns in games that offer multiple paylines, times of day in which the person played, what games were played, durations of play, what bonus games were played, what progressive games were played, time on device, coin in, volatility of games played, amount won, size of wins, gaming machines played on (does the player have a preferred machine?), number of large wins awarded in a given game session, etc.

[0078] The personal information may be initially collected via one or more means (surveys, etc.) and/or updated based on new information (game history). The new information may include historical game play data gained via player tracking card, information shared by other casinos and sources after a person's identity has been established, etc.

[0079] Information may also be gathered for numerous people at a single time. For example, attendees at a Science Fiction convention or a trade show in Las Vegas may receive complimentary game play cards when they attend the conference and/or stay at a particular hotel/casino. In this case, a casino already knows enough information for each attendee (they like Science Fiction) to recommend Science Fiction games to them; and the complimentary game play cards may be player tracking cards that identify the person and present one or more Science Fiction games on a gaming machine when the person attempts to redeem the free credits provided on the

complimentary card. Additional personal game selection information for the person may be gained when the person booked their room (e.g., age, sex (M/F), occupation, etc.). Further, once the person uses the complimentary card, any game play information on the free games may be used to build personal game selection information for the person and further tailor recommended games to the person.

[0080] Other methods and techniques for collecting personal game selection information may be used, and the present invention is not limited by any particular method or technique of collecting personal information. For example, marketing information obtained by businesses associated with a casino is another source of personal information.

[0081] The collected information may be converted to personal game selection information. This implies that some personal information, such as a person's name and biometric information for example, may not be useful for selecting games. In one embodiment, the game selection software selects recommended games using predetermined fields that each correspond to one particular personal criterion. Alternatively, the collected information may have to be input into a computer or coded, if necessary.

[0082] Flow chart 60 then selects a set of recommended games for a person using the personal game selection information for the person and using the game meta-data for the set of available games (68). The output of step 68 is a set of recommended games for a person. The set can be stored using relatively little memory by enumerating the games and storing numbers for each recommended game for any person.

[0083] Flow chart 60 may then be updated as desired (70). For example, a casino may wish to reconfigure the selection criteria (proceed to 64), may collect new data on the person (proceed to 66), may obtain game play data for the person (proceed to 66), may acquire new games (proceed to 62); any of which may produce a new set of recommended games.

[0084] FIG. 6 illustrates a method 80 for offering a set of recommended games to a person in accordance with one embodiment of the present invention.

[0085] Flow chart 80 begins by detecting personal information for a person at or near gaming machine (82). In one embodiment, the gaming machine detects personal game selection information from the person. For example, the person may only

present a voucher, widely given to participants at a Science Fiction conference, which indicates a few pieces of personal game selection information about the person (e.g., Science Fiction interest, etc.). In another embodiment, the gaming machine (or a device associated therewith) identifies the person and relates them to a number assigned to the person. The number may be a reference number in a database that stores personal game selection information for the person. In some cases, the gaming machine identifies the person at the gaming machine using a portable credit device or a player tracking card presented to the gaming machine by the person. As discussed above, the portable credit device can be any device capable of storing information and being read by an appropriately configured reader on the gaming machine. As such, the invention is not limited to the tracking cards. Rather, any device capable of storing information and identifying a person (or information related to a person) can be employed. For instance, paper tickets such as those used in the EZ Pay® system produced by IGT of Reno, NV can be used. Such tickets can be modified to include information for implementing the various embodiments of the invention, such as information stored on the ticket to identify a person and permit a free preview play.

[0086] In another embodiment, the gaming machine identifies the person near the gaming machine using biometric information for the person. For example, a camera 44 of gaming machine 2 may capture a picture of the person, and using appropriate face recognition software, identify the person. Other forms of biometric identification suitable for use herein include fingerprint recognition, voice recognition, and palm print recognition, for example.

[0087] Other forms of personal identification may be used at the gaming machine. For example, a person may enter an identification code using the key pad on the gaming machine. RFID devices may also be carried by the person and used to identify the person when they are within a reading range of an RFID reader included on a gaming machine.

[0088] A person's name need not be identified at the gaming machine. In some cases, only a number is associated with the person's identity and allows the person to remain anonymous. Alternatively, the person may have received a tracking card as part of a distribution to a conference to induce patronage at a casino local to the conference. Identity for the person may later be added to their player tracking card, e.g., when they attempt to redeem cash value or comps on the cards.

[0089] In one embodiment, the gaming machine includes selection software and determines the set of recommended games based on the information received from the person.

[0090] In a server based system, the gaming machine then sends the personal information to a server and requests a set of recommended games (84). In one embodiment, the gaming machine sends the person's identity, or a number corresponding to the identity or corresponding to a portable device presented to the gaming machine, to the server with a request for a set of recommended games for that person. The information and request may also be stored for the person according to their unique number to further accumulate information on the player. In another embodiment, the gaming machine sends personal game selection information read from a credit device that was detected by the gaming machine. In this case, the server receives the personal game selection information and selects set of recommended games based on the received information. In this case, the server may create an account for the person, assign them a unique number, and begin accumulating data for that person based on their game play and interaction.

[0091] The set of recommended games may change over time. Initially, the first set of recommended games may be based on little information, such as information common to all participants to a convention. This first set represents an initial guess for the person. The initial guess may also be matched to more detailed results for similar people, e.g., people with a high disposition for subject matter of the convention (e.g., Science Fiction). The set of recommended games then adapts over time as more information, such as game choices and betting patterns, becomes available.

[0092] In response to the request, the server responds and sends a current set of recommended games to the gaming machine. The server may be responsible for a) storage of all personal game selection information; and/or b) selection of recommended games according to selection methods as described herein. In one embodiment, the server responds in real time by receiving the personal game selection information, performing a selection based on the received information in real time, and promptly sending the set of recommended games back to the requesting gaming machine. The server may also store game code for each game offered by a casino (e.g., a downloadable environment where games are downloaded to individual gaming machines by request). In this case, the server may also begin downloading one or more

games, or video previews thereof, to the gaming machine based on the set of recommended games.

[0093] Software on the gaming machine then displays the recommended games on the gaming machine (86). In some cases, the set of recommended games appears in multiple logical sets that are characterized by a descriptor. For example, the gaming machine may display five logical sets characterized as: 'Games Previously Played', 'Science Fiction', 'Poker Games', 'Recommended Games', and 'New Games'. In this multiple set case, the gaming machine first receives, from the player, a selection for one of the descriptors (88), e.g., the person touches an appropriate position on a touch-screen to open a menu for one of the logical sets, to display all the recommended games in that logical set. The gaming machine then receives a selection for a particular game (90). Descriptors are also well suited for use when the set of recommended games does not fit into the display area and is broken into subsets for convenience of presentation. Alternatively, if only one logical set is presented, the set of recommended games easily fits into the display area, then all recommended games may be initially shown, and the person selects a desired game (90).

[0094] The game is then offered for play to the player (92). Game play proceeds after the player provides the gaming machine with appropriate credit.

[0095] The present invention may also permit a player to preview games that have been selected. Such a sample or game preview can include many different modes of play. For instance, the gaming machine can let the player play a free 'preview' game or show the game to the person without a wager. Alternatively, the gaming machine can display a preview of progressive play, along with the progressive jackpot. It can also preview special bonus modes of various games, demonstrating to the player various special prizes than can be won. Such preview play can be interactive, allowing player participation, or passive, simply illustrating sample play without allowing user interaction. Preview play can also include full, nominal, zero, or other payouts if so desired.

[0096] Previewing allows a casino to further attract players to unfamiliar games and helps gaming establishments attract further business. In addition, players benefit by gaining access and familiarity to a wider variety of games, many of which they may not have been familiar with. Further description of previewing games is described in commonly owned and co-pending patent application No. 10/910,407 and entitled

"METHOD AND APPARATUS FOR PREVIEWING A GAME", which is incorporated by reference in its entirety for all purposes.

[0097] Method 80 may then track and store game play information for the person (96). This provides new personal game selection information that can be used to further tailor and improve the set of recommended games provided to a player at a subsequent time. Information gathered may include: what game(s) the person played, information associated with the game(s) such as any meta-data for the game, how many times a person played a game, a minimum wager, a maximum wager, an average wager, payline usage, other betting interaction information, a number of games per session (e.g., each time they use their player tracking card), when they play, and combinations thereof such as dates or times of certain games and wager amounts made at certain times of day.

[0098] In another embodiment, as a game play session continues, a gaming machine generates a new set of recommended games based upon information gained from player interaction. For example, if the player repeatedly uses a particular betting pattern during their game play, the gaming machine may recognize the pattern, save it as personal game selection information, and recommend a new set of games that better reflects the new information.

[0099] The present invention selects recommended games from a larger set of available games. In one embodiment, a server applies a weighting algorithm to game meta-data for numerous games. The weights are based on data associated with each player. The algorithm is stored as software on a server and applied to all the game meta-data and personal game selection information stored thereon.

[0101] FIG. 7 illustrates a weighting algorithm 500 suitable for selecting games in accordance with a specific embodiment of the present invention. Weighting algorithm 500 provides a summed result, N, that accommodates each game meta-data entry, C, and applies a weight, W, to each meta-data entry based on personal game selection information for the person. Three weighting algorithms, 500a, 500b and 500c, are shown for three games, Game A, Game B and Game C, respectively.

[0102] The meta-data entries, C, vary for each game. The software may include hundreds of meta-data entries that characterize aspects of each available game; each game typically only includes a subset of meta-data entries according to that game. In an illustrative example for Game A: C_1 refers to a number of times that a person

played game A, C_2 refers to a science fiction genre, C_3 refers to an age of the person, C_4 refers to the presence of a bonus game, C_5 refers to the presence of multiple paylines, and C_{na} refers to a particular famous actor included in Game A. In an illustrative example for another science fiction game B, C_1 refers to a number of times that a person played game A, C_2 refers to a science fiction genre, C_6 refers to how recently the person played the game, C_7 refers to a betting amount for the game, C_{10} refers to the presence of a progressive game, and C_{nb} refers to a movie that the game is based upon. Game C also includes another weighting algorithm 500c that includes common and different meta-data. Other meta-data entries may be included, depending on the game, as one of skill in the art will appreciate.

[0103] A weight is applied to each meta-data entry. The weight roughly attempts to numerically characterize a) a person's desire or value for the corresponding meta-data entry, and/ or b) a system designer's or casino's value for the corresponding meta-data. The weight may include a numerical representation of value, personal preference, affinity, previous experience, combinations thereof, or opposition to the meta-data entry. The weight may also reflect a gaming establishment's desire to promote certain games. For example, weights for Game A in FIG. 7 are as follows: W_1 refers to a game designer's value for the number of times that the person played game A, W_2 refers to the weight applied to a person's preference for science fiction games, W_3 refers to a game designer's value of the person's age in game selection, W_4 refers to the weight applied to a person's preference for a bonus game, W_5 refers to the weight applied to a person's preference for multiple paylines, and W_{na} refers to the weight applied to a person's affinity for particular famous actor included in Game (e.g., as determined from a survey). Weights may be given on a scale from 1-100, 0-1, 1-10,000, or any other suitable range that permits relative assessment between meta-data; the range and granularity of the scale is arbitrary and a matter of design choice. The weights may also go negative, to indicate a dislike for or opposition to a particular meta-data entry (e.g., the person strongly dislikes science fiction games and movies). The weight may be initially derived from a questionnaire that prompts a user to describe, rank and/or rate preferences using a numeric system. For example, a user may be given a questionnaire that asks the user to characterize the preference on a scale from 0 (indifferent) to 10 (strongly like) or -5 (strongly dislike) to 0 (indifferent) to 5 (strongly like). The weights will also correlate historical game play factors, as

appropriate. For example, a value of 0.1, on a scale from 1-10, may be added each time the person plays the game, wins on the game, selects the game from a list, etc. Games may also be given negative weights each time the person loses a certain amount of money on the game, ignores the game from a list, etc.

[0104] A weighting algorithm 500 produces a numerical value, N, for each game in a set of available games offered by a casino. N is a quantitative assessment of a person's desirability for that particular game. The selection software then applies a weighting algorithm 500 for each game A, B, C and so on, for all games available to the casino or gaming establishment. Dozens or hundreds of games may be ranked in this manner. The output, N, for each person then varies for each person based on their personalized weights, W. The numerical value, N, permits the games to be ranked and selected based on the common scoring system.

[0105] Each person may have their own set of weights – both initially and as time passes and more personal game selection information is gathered for each person. Thus, an initial selection may be based on demographic information for the person, while later selections will encompass personal game selection information collected from numerous game play sessions.

[0106] Recommended game selection is then a matter of design choice. There are numerous options for selecting recommending games based on numerical values (N) for each game, and the present invention is not limited by any specific selection process. For example, the selection software may rank the games according to their respective numerical values. If only one set of recommended games will be offered to a player, then, the top 5, 10 or top 'x' games may be offered to a player. Alternatively, a threshold may be applied. The threshold may include the top 5% of games, a certain score for N above which all games are selected, etc.

[0107] Multiple logical sets of recommended games may also be produced. For example, sets for 'Games Played', 'Science Fiction', 'Poker Games', 'Payline Games', 'Recommended Games', 'New Games', and 'Recently Played', may be generated. Selection within each logical set may be accomplished by re-calculating N for each game with a meta-data entry for each logical set given a disproportionately large weight, W, that corresponds to that descriptor and logical set. For example, games for a 'Science Fiction' logical set may have the weight W for Science Fiction games boosted to produce a larger number, N, for all Science Fiction games. The

games may then be selected using the ranking or threshold criteria described above, e.g., top 5 games in the Science Fiction set. Alternatively, selection within each logical set may be accomplished by filtering out games that only include a particular meta-data entry for a logical set at issue (e.g., only Science Fiction games) and ranking games appropriately after the filter.

[0108] Each logical set of recommended games is labeled and identified with a descriptor. Some examples of descriptors are 'Recently Played', 'Last x Games', 'Recommended Games', 'Recent Arrivals', and 'All Games'. A gaming machine may also offer a player the option to select certain logical sets, using an account preferences interface (see FIGs. 8A and 8B), which logical sets they would like to appear on their personal menu. The selection software would then generate a list in response. The menu would display the set or sets of games indicated by the player's preferences.

[0109] The selection process may also employ a rules engine that allows designers to tailor the selection process and add specific rules. The rules engine may apply any logic to the selection process. One rule applies direct correlation logic, such as automatically offering a 'biker' game to a motorcycle group that is visiting the casino. Alternatively, if a person has not selected a particular game from a list in, say, 6 months, then the game may be removed from all recommended sets.

[0110] Although the present invention has been described with respect to a weighted algorithm for selecting a set of recommended games, it is contemplated that other selection software is suitable for use for selecting recommended games. For example, a relational database may be configured to produce recommended games using stored logic and personal game selection information. In one embodiment, the selection software includes commercially available software adapted to select recommended games. One suitable software package includes SQL Server 2005 as provided by Microsoft, Inc. of Redmond, WA, and adapted to select games as described herein.

[0111] Pre-configured selection software permits automated selection that may be repeated off-line, and in real-time, for hundreds of thousands of patrons. The software also permits tailoring by a gaming establishment. Thus, some casinos may cater to certain demographic groups by configuring the weighting algorithm to favor and

recommend certain games that appeal to the chosen demographic groups (e.g., young, old, certain conventions, etc.).

[0112] The weighted algorithm may also be refreshed at will, meaning that a casino can apply the weighted algorithm periodically, say once a day or every week to keep the sets of recommended games current based on new player information. The casino can also update the software when new games arrive, games are no longer offered, a convention comes to town, etc.

[0113] A system designer or casino may also tailor and change the weights, as desired. Thus, a casino may change weights for certain games and/or meta-data entries that they value and want to encourage. For example, the casino may promote games that have frequent wins, progressive jackpots, attract younger or older demographic groups, etc. This allows a casino to influence their patronage. It also permits a casino to use their accumulated – and sometimes highly valued and highly guarded – player information to make changes that the casino feels will further increase patronage and promote business to new or targeted players.

[0114] In one embodiment, the present invention permits a player to actively affect what games are offered and guide the presentation of recommended games. FIG. 8A shows an exemplary user interface 150a for selecting and modifying recommended games in accordance with a specific embodiment of the present invention.

[0115] User interface 150a permits a person to create and modify one or more sets of recommended games and choose what sets are displayed. User interface 150a is displayed on a display device such as that included with a gaming machine or a home computer using a remote server (see FIGs. 9 and 10). User interface 150a may be also be used by a game operator or a preference account administrator to create and modify sets of recommended games for a plurality of game players. One or more recommended games selected by the player or by a representative of a casino may be used to customize a game playing experience of the player. The sets of recommended games selected by a player may be stored as preference account information on a preference account server (See FIGs. 9 and 10).

[0116] In one embodiment, a gaming machine offers interface 150a (e.g., on a touch screen panel) that allows a player to select a preferred game that the player likes to play. This feature is permissible on gaming machines that offer multiple games. As shown, using an input device on a gaming machine, a player may select from three

sets of recommended games: a first set of recommended games 180a ('Recently Played' games), a second set of recommended games 180b ('Video Poker' games) and a third set of recommended games 180c ('60s Television' games). Each set includes a pull-down menu that accesses recommended games in that logical set. For instance, a player may use the pull down menu 180b for Video Poker games to select from a number of different types of video poker games 182 such as: single player poker, double play poker, triple play poker, 10 play poker, 100 play poker, etc. Other games available in the 'Recently Played' set 180a may include but are not limited to video black jack games, video pachinko games, video card games, video keno games and video games of chance. As previously mentioned, additional menus (not shown) with logical set descriptors may be used with interface 150a.

[0117] A pull down menu 184 allows a user to select which logical sets are displayed, e.g., by checking specific descriptors for each set from a list of descriptors stored for that person or offered by the casino. Menu 184 may also permit the user to determine how games are sorted for illustration on interface 150a. Exemplary descriptors in this regard include "Number of Plays", "Wager Amounts", "Name", "Game Type", etc. Another menu may permit the user to set what games are recommended. For example, if the user has less than 5 games in their interface 150a, then they may fill space on interface 150a with descriptors such as "Popular Games", "Theme of the Week", "New Games", etc.

[0118] Interface 150a may also include other graphics inputs and controls. One input may permit the person to set the number of recommended games provided with interface 150a. For example, a box may allow the person to input 5, 10 or any number of games that they want recommended at any time. Another input may allow the person to include any games played in the last 'x' days, where x is determined with a pull-down menu.

[0119] The gaming machine offering interface 150a may also filter available games according to the display device on a gaming machine. For example, certain games often require specific screen sizes or display types (e.g., LCD panels or multiple panels where the second panel is dedicated to a bonus game). The gaming machine may then omit games unavailable to its display device(s). In addition, interface 150a may list the game but point the person to another local gaming machine that can play the game.

[0120] Interface 150a may employ other graphics selection tools other than pull-down menus, as one of skill in the art will appreciate. For example, one field in interface 150a may recommend games as follows: "People who played this game also enjoyed these games: GAME A; GAME B; GAME C, etc". Other forms of list and game presentation are suitable for use herein.

[0121] FIG. 8B is a block diagram of a user interface 150b for modifying a player preference account in accordance with another embodiment of the present invention. User interface 150b allows a game player to create and modify a preference account that includes recommended games that correspond to one or more game playing options preferred by the player. Information input by the person to the preference account then represents a source for personal game selection information useful in recommending games to the person.

[0122] For example, by selecting the bonus category button 159, the gaming machine uses the personal game selection information to recommend two different bonus games 162 based on their other personal information (e.g., Science Fiction games with bonus features). A player may select one of two different bonus games 162 available in game feature setting menu 149 to initiate the game. A player may also be able to select from a number of recommended progressive games available with a particular video game presentation on the gaming machine. In some embodiments, the user interface 150b allows a player to select a recommended progressive game. In yet another example, a player may be able to select certain prizes and pay-out tables that a player enjoys.

[0123] Preference account information, other than preferred games, may include but is not limited to: loyalty point account information and settings, preferred promotional opportunities, preferred game feature settings for the games, preferred gaming machine settings, preferred bonus games, preferred progressive games and preferred service options. For instance, using the user interface 150b, a player may choose to be informed about one or more promotional opportunities preferred by the player in a promotion category 151. This provides personal information that the person may be interested in games related to the promotional opportunity. Examples of promotional opportunities include tickets to a local show, a discount at a restaurant, or a lodging discount. After selecting the promotion category button 151, a player may

select from among a number of different promotional choices 177, such as food, lodging and entertainment, which may be available through the interface 150b.

[0124] Another type of preference a player may be able to specify using the interface 150b is one or more preferred gaming machine settings. A preferred gaming machine setting may allow the player to control various gaming machine features, such as but not limited to a preferred betting pattern, a preferred gaming machine denomination, a preferred video display (e.g., LCDs or wheels), an input configuration for the input devices on the gaming machine and preferred games on the gaming machine.

[0125] Another type of preference a player may be able to specify using the interface 150b is a preferred service option. A few examples of a preferred service options include a drink that a player likes to be served, a type of snack that a player likes to be served or a preferred method of crediting awards at a gaming machine. In 150b, a player may select the drink category 152 button that allows the player to select from a number of beverage types 176, such as beer, wine and cocktails.

[0126] As another example of preferred service option setting, a player may be allowed to select a preferred method of receiving credits from a gaming machine. For instance, some newer gaming machines allow players to receive awards as a printed award ticket such as an EZ Pay™ ticket instead of cash. A player may specify to receive credits as an indicia of credit such as tokens dispensed from the gaming machine, to receive credits on a printed award ticket, to receive credits as a deposit to an account via an electronic fund transfer or combinations thereof.

[0127] Another type of preference a player may be able to specify using the interface 150b is one or more preferred game feature settings for a preferred game selected by the player. The preferred game feature setting may vary according to the game selected. For example, one type of video slot game may allow different game feature setting than another type of video slot game or than a video poker game. The preferred game feature settings may include but are not limited to a game version, a game color scheme, game graphical features, a game presentation speed, a game pay-out table and a game audio feature. For instance, a player may be able to increase or decrease the speed of a game presentation within a specified range using a game presentation speed setting (not shown).

[0128] As an example of selecting a gaming machine setting, using the wager button 153 in the interface 150b, a player may select from a number of gaming machine denominations 175, such as nickel, quarter, dollar or custom. The custom button may allow the player to specify a specific denomination such as a favorite number or a lucky number. The custom denomination feature may be enabled when a player is credited an award using an award ticket or electronic fund transfer. The denominations may vary as function of a local currency where the gaming machine is located. For instance, in the United Kingdom a player may select denominations in pence and pounds. A player may also be able to select a betting pattern such as a multiple of the denomination selected on the gaming machine. Thus, when a player initiates a game on a gaming machine that has been configured to reflect the players selected preferences, the gaming machine may use the player's preferred betting preferences.

[0129] In another example of a gaming machine setting, a player may be able to select a volume setting on the gaming machine. After selecting the volume setting 154 on the gaming machine, the player may select a volume level option 174 such as a low, a medium or a high setting according to the individual taste of a player.

[0130] A player may use a game feature interface 149 portion of the interface 150b to select various game feature settings such as music types that may be played while a particular game is executed on the gaming machine. The music may be integrated into the game presentation or a player may be able to listen to the music separately through some output means, such as headphones, while the player is playing a game on the gaming machine. For instance, using the music button category 156, a player may select from one or more types of music categories 166 such as rock, classical or oldies. Again, each selection provides information useful in providing recommended games to a person. Further additional categories, such as country music or alternative music, may also be available through the interface. The musical selections may be game specific, e.g. the musical selections may vary from video slot game to another or may vary between video slot games and video poker games. Thus, the format of game feature interface 149 may change depending on a game selection 173 made by the player.

[0131] Using the game feature 149 interface portion, a player may be able to select graphic patterns on a gaming machine such as color schemes and graphic symbols that

are integrated into a game presentation displayed on the gaming machine. For instance, for a video slot game, a player may use the graphics button 157 to choose a symbol type 165, such as bars, fruits, stars and custom, which may be used in a video slot game presentation. When the fruit button is selected from the symbol types 165, fruits may be used as symbols in the video slot game presentation. The fruit button may include additional selections (not shown) such as types of fruits (e.g. oranges, apples, pears, cherries, strawberries, etc.) which a player may select. When the custom button is selected, a player may be able to select a custom graphic such as a picture of the player or a picture of pet, which may be integrated into a video game presentation on the gaming machine.

[0132] The user interfaces 150a and 150b may allow a player or user (e.g. an interface administrator) to view and possibly modify player identification information. Some information stored in the preference account, such as player identification information, may be privileged in that only an interface administrator or other entity with necessary access privileges may be able to modify the privileged information. For instance, an administrator may be able to view and modify a player's name 172, an account number 170, a type of membership 169, a player's address (not shown) for many players. However, a player using an interface 150 may be able to only view and modify this information for their own account.

[0133] The type of membership 169 may correspond to a value of the player and accord different privileges to the player that may be selected. For instance, a player may be a platinum, a gold, a diamond or a silver member (displayed in 169) according to an amount or a frequency of game play by the player. Using the interface 150, platinum members may be able to make different preference selections than a silver member. For example, only platinum members may be allowed to select and to play certain games or use certain pay-out tables.

[0134] User interface 150b includes a number of command buttons such as help 160, current 161, save 164 and apply 167 that allow a user of the interface 150a or 150b to execute different commands. For example, a user may be able to see the effects of game feature setting using the apply button 167. When the apply button is selected, a simulation of a game presentation using the game feature settings selected in 149 may be presented in preview window 168. Preview window 168 allows a user to see a new game for the first time, see different graphics implemented in a game

presentation, hear different types of music and determine the functions of different input buttons on the gaming machine. The help button 160 allows the user to obtain help relating to using the interface 150. Help instructions may be displayed in window 168 or another window. The current button 161 may allow the user of the interface 150 to see their current preference account selections. The save button 164 may allow the user of the interface 150 to save a number of preference selections that have been made during a session using the interface 150 to a storage device of some type such as a hard drive on a preference account server.

[0135] As mentioned above, the personalized game recommendation process may be centralized in a game server. FIG. 9 is a block diagram of a recommended game server 201 connected to a number of local and wide area networks in accordance with another embodiment of the present invention. Server 201 both receives information from components in the system (e.g., useful for assembling personal game selection information for a person), and provides sets of recommended games when requested. The recommended game server 201 may also be responsible for managing player preference accounts.

[0136] As described above, user interfaces for modifying player preference accounts and providing recommended games may be displayed on many different types of computing devices such as a gaming machines (e.g. 202, 204, 206, 246, 248), a home computer 252, a kiosk 205 located in a casino 210, a video display interface in a restaurant 220 or a hotel room (e.g. 214, 216 and 218) in a hotel 224. For instance, from the home computer 252 in a home 250, a player may access a player preference account stored on the preference account server 201 using an interface of some type. In one embodiment of the present invention, using the home computer 252, a person may access the preference account server using a web browser displaying an interface such as the interfaces described above. Using a preference account interface via a web browser, a player may create or access a player preference account, may change preferred and recommended games, etc. To access the web interface, the home computer may connect with the server 201 using a connection to a local ISP (Internet Service Provider) 254, which is connected to Internet 225. The server 201 supports web access via a connection to the Internet 225 through firewall 207 and local ISP 215.

[0137] In another embodiment, using a preference selection interface via a web browser, the player may be able to use a printer connected to their home computer to generate a printed ticket that may be used as a personal identification instrument for use with a gaming machine. The preference interface may supply additional information, such as a unique serial number or a unique bar-code, which is printed to the ticket and allows it to be used to configure a gaming machine with preferred games. The additional information that is printed to the ticket, such as the unique serial number or the unique bar-code, may be encrypted by the host computer for security purposes. The encrypted information may allow the host computer to authenticate the printed ticket when it is used in a gaming machine.

[0138] In other embodiments, server 201 may be accessed through a preference account interface displayed on a kiosk such as a kiosk 205 in a casino 210, a preference account interface displayed on video display in a hotel room such as video displays, 214, 216 and 218, in a hotel 224 or a video display in a restaurant such as restaurant access 220. The restaurant access 220 and room accesses, 214, 216 and 218 are connected to server 201 via a local area network 222. The kiosk 205 in casino 210 is connected to the preference account server 201 via a local area network 208. The local area networks 208 and 222 may be wireless networks, wired networks or combinations thereof. The preference account interface used with the restaurant access 220 and room accesses, 214, 216 and 218 may be obtained through a web browser but is not limited to web access. For example, video displays with set top boxes may be used to access preference account information stored on the preference account server 201 using a custom interface only available over the local area network.

[0139] Recommended games and preference account information may be accessed through a preference account interface displayed on a gaming machine such as gaming machines 202, 204 and 206 in casino 210 or gaming machines, 246 and 248 in store 240. In casino 210, gaming machines 202, 204 and 206 communicate locally with server 201 via local area network 208. In store 240, gaming machines 246 and 248 connect to a local ISP 245 and Internet 225 via some communication means 244 such as a modem connected to a communication line (e.g. phone or cable) and then communicate with the preference server 201 via the preference account interface using an Internet connection. A secure virtual private network may be used when

gaming machines, such as 246 and 248, are connected remotely to server 201 over the Internet 225.

[0140] Firewall 207 may be hardware, software or combinations of both that prevent unapproved access of server 201 and other devices connected to server 201, such as gaming machines 202, 204 and 206, by an outside entity.

[0141] A game player using one of the gaming machines, 202, 204, 206, 246 or 248, may be able to view and modify recommended games and preference account information using an interface as previously described. As described above, the information may be used to select and recommend new games.

[0142] FIG. 10 is a block diagram of a recommended game and preference account server 300 connected to a gaming machine 2, kiosk 305 and room access 313 in accordance with another embodiment of the present invention. A player may begin a game play session on the gaming machine 2 by entering identification information into the gaming machine 2 using an input interface of some type. The input interface may be a card reader 320, a video touch screen 318, selection inputs 326, a key pad, button pad, a mouse, a track ball, a touch pad, a joy stick, a wireless interface, a biometric input device and combinations thereof. The biometric input device may be one of but is not limited to a finger print reader, a retina scanner, a camera and a microphone.

[0143] The retrieval of recommended games and preference account information by gaming machine 2 may be influenced by one or more player inputs. The player inputs may be received by the gaming machine 2 using one or more input devices including but not limited to a video touch screen 318, a button panel 326, a track ball, a mouse, a microphone, a card reader, a joy stick, a touch pad, a wireless interface, a key pad and combinations thereof. For example, in some embodiments, the gaming machine may ask the player for a confirmation input before the gaming machine reconfigures itself according to preference account information stored in the player's preference account.

[0144] In other embodiments, the gaming machine 2 automatically reconfigures itself, using the configuration manager 355, according to recommended games and preference account information stored for the player without the confirmation input by the player. In another example, the player may request to view or modify personal account information such as their set(s) of recommended games. In this case, the

gaming machine retrieves the personal account information from the source where it is located and displays the requested information using an interface such as 325. The interface may be displayed on a primary display such as 318 integrated into the main cabinet of the gaming machine 2 or a secondary display, such as 322, in a top box 319 mounted on top of the gaming machine 2.

[0145] Gaming machine 2 also includes a processing and communication system that includes processor 340, communication interface 342, and memory 344.

[0146] In one embodiment, processor 340 represents the main processor or a component control processor for gaming machine 2. When acting under the control of appropriate software or firmware, processor (or CPU, or logic device) 340 implements game play and retinal image scanning functions as described herein. CPU 340 may include one or more processors such as a processor from the Motorola family of microprocessors or the MIPS family of microprocessors. In an alternative embodiment, processor 340 is specially designed hardware for controlling the operations of a gaming machine. In one embodiment, one of memories 344 (such as non-volatile RAM and/or ROM) also forms part of CPU 340. However, there are many different ways in which memory could be coupled to the processing system.

[0147] Communication interfaces 342 control the sending and receiving of data to and from gaming machine 2. Suitable hardware interfaces and their respective protocols may include USB interfaces, Ethernet interfaces, cable interfaces, wireless interfaces, dial up interfaces, and the like.

[0148] Memory 344 stores instructions and software for implementing methods and techniques as described herein, and may include any suitable memory source. Such memory components are available from a wide variety of vendors. Because such information and program instructions may be employed to implement the systems/methods described herein, the present invention relates to machine-readable media that include program instructions, state information, etc. for performing various operations described herein. Examples of machine-readable media include, but are not limited to, magnetic media such as hard disks, floppy disks, and magnetic tape; optical media such as CD-ROM disks; magneto-optical media such as floptical disks; and hardware devices that are specially configured to store and perform program instructions, such as read-only memory devices (ROM) and random access memory (RAM). The invention may also be embodied in a carrier wave traveling over an

appropriate medium such as airwaves, optical lines, electric lines, etc. Examples of program instructions include both machine code, such as produced by a compiler, and files containing higher-level code that may be executed by the computer using an interpreter.

[0149] When the gaming machine 2 retrieves recommended games and preference account information from server 300, a master gaming controller (such as processor 340) that controls one or more games played on the gaming machine 2 sends a request to the remote server 300 using a communication interface within the gaming machine (not shown) connected to local area network 308. The request for recommended games and preference account information may be encapsulated in one or more messages of some type. The gaming machine 2 may also send messages to server 300 that include preference account information to be stored in server 300or include commands for server 300 to execute. For instance, a player may request one or more modifications be made to their personal account information to be stored to server 300.

[0150] Server 300 may receive the one or more messages via a communication interface 303 connected through a firewall 301. The messages may be received from a gaming machine, such as 2, a kiosk, such as 305 or a room access interface, such as 313. A logic device 302 within server 300 is designed or configured to execute one or more software applications that select games based on the receipt of personal game selection information. In addition, the logic device may designed or configured to execute software applications that allows preference account information stored in a plurality of different preference accounts to be modified from an external device such as a gaming machine 2, kiosk 305 or room access interface 314. A memory 304 stores one or more of: a list of available games (e.g., to a casino where gaming machine 2 is located), recommended game selection software, personal game selection information for one or more people, etc. Memory 304 may include a hard drive or some other appropriate storage medium. Communication interface 303 connects to one or more local area networks, such as 308 or 325, and a wide area network 352 such as the Internet. In some embodiments, the preference account interfaces generated by server 300 may be accessed via a web browser.

[0151] Some information stored on server 300 may be accessed and modified via kiosk 305 and room access interface 313. For kiosk 305, a player may view and

modify recommended games and preference account information stored on server 300 using a touch screen 312, selection inputs 327 and a card reader 315.

[0152] FIG. 11 is a method depicting an implementation of recommended games using a server for one embodiment of the present invention. In 700, a recommended game server, which may be a device separate from a gaming machine or a gaming machine with server capabilities, receives a request for recommended games. The request may be made from a number of different devices external to the server such as a gaming machine, a home computer, a casino kiosk, a personal digital assistant, a phone and a video display interface.

[0153] In 704, the server selects recommended games for according to personal game selection information associated with the request. The personal game selection information may come from the requesting device, or may be obtained internally by the server using identification for the person stored by the server and associated with the personal game selection information. The identification information may include an alpha-numeric code, a player's name, biometric information, a player's account number, and combinations thereof. Various techniques for selection were described above.

[0154] In one embodiment, the server maintains a list of identification numbers and people that are authorized for free preview play, as well as all parameters for configuring the appropriate preview play. The server then checks the received identification number against its list. If the identification number does not match any on the list, preview play is unavailable for that person. If a match is found, preview play is available for that person.

[0155] In 706, the recommended games are sent back to the requesting device, which may simply comprise one or more recommended game lists, and displayed to a person using an appropriate interface, such as one or more menus. The menus allow a person to view listings of, and possibly preview, recommended games stored on the preference account server. In some embodiments, the interface may be accessed via a web browser. Various other preference account information may also be sent, such as player preference items listed above.

[0156] In 720, when the person selects a game that the gaming machine does not currently have loaded thereon, the server receives a request for a specific game, and retrieves the chosen and recommended game.

[0157] In 725, the recommended game server sends one or more recommended games and any additional (but not necessary for the present invention) preference account information to the external device requesting the recommended games. While the player is using an interface hosted by the preference account server, a player may make multiple requests for recommended games via the interface. Thus, 700, 704, 706, 720 and 725 may repeated a plurality of times by the same player during a single session of using the interface, over multiple different sessions by the same player and over multiple sessions by different players. A single session may defined as the time period between when a user is granted access to a preference account, such as by entering player identification information, and when a player's access to the preference account is terminated. Thus, a second subsequent session to a first session begins after a player's access has been terminated in the first session and a new access to a player, which may be the same or a different player than in the first session, has been granted in the second session.

[0158] If preview play is enabled for this person, then the gaming machine receives parameters for preview play, and preview play is set up accordingly. The gaming machine then initiates preview play according to these parameters. Such parameters include the parameters of the game to be played, such as the outcomes or the rewards to be paid.

[0159] In some embodiments, to configure itself, the gaming machine loads one or more software modules from a memory device on the gaming machine. For instance, when a recommended game selected by the person is different than a game currently loaded on the gaming machine, and then the gaming machine loads one or more software modules from the memory device to allow the selected game to be played on the gaming machine. In another embodiment, one or more software modules needed by the gaming machine to configure itself may be located on a remote file storage device. Therefore, the gaming machine may initiate a download process to transfer the needed software from the remote file storage device to the gaming machine. For instance, the gaming machine may download software modules used to play a game of chance chosen by a player. Details of types of software modules that may be downloaded to a gaming machine and details of methods for downloading software modules to a gaming machine from a file storage device are described in commonly owned U.S. Patent No. 6,685,567, and in commonly owned and co-pending U.S.

Patent Application No. 10/040,239, filed on January 1, 2002, by Lemay, et al., and titled "Game Development Architecture that Decouples the Game Logic from the Graphics Logic,"; both of these documents are incorporated herein in their entirety and for all purposes.

[0160] Although the foregoing invention has been described in some detail for purposes of clarity of understanding, it will be apparent that certain changes and modifications may be practiced within the scope of the appended claims. For instance, while the gaming machines of this invention have been depicted as having gaming devices physically attached to a main gaming machine cabinet, the use of gaming devices in accordance with this invention is not so limited. For example, the display screen features which may be provided on a top box may be included in a stand alone cabinet proximate to, but unconnected to, the main gaming machine chassis.

What is claimed is:

1. A method for offering a set of recommended games to a person near a gaming machine, the method comprising:

storing personal game selection information that is useful for selecting a game from multiple games for the person;

selecting the set of recommended games, from a set of available games, for the person using the personal game selection information; and

displaying the set of recommended games to the person on a video display associated with the gaming machine.

2. The method of claim 1 further comprising identifying the person at or near a gaming machine.

3. The method of claim 2 further comprising associating an identification number for the person with the stored personal game selection information.

4. The method of claim 2 wherein the person is identified at the gaming machine using a person tracking device presented to the gaming machine by the person.

5. The method of claim 1 wherein the personal game selection information includes personal information provided by the person or a device carried by the person.

6. The method of claim 5 wherein the personal information is provided by the person in a questionnaire.

7. The method of claim 1 wherein the personal game selection information includes game play information obtained during previous game play by the person.

8. The method of claim 7 wherein the set of recommended games includes a game related to a previous game played by the person.

9. The method of claim 1 further comprising previewing a recommended game selected by the person.

10. The method of claim 1 wherein the set of recommended games includes a game that the person previously played.

11. The method of claim 1 further comprising requesting the set of recommended games from a server.

12. The method of claim 1 further comprising transmitting the set of recommended games from the server to the gaming machine in response to the request.

13. The method of claim 1 wherein selecting the set of recommended games includes an automated selection that uses the personal game selection information to produce the set of recommended games.

14. The method of claim 13 wherein the automated selection provides a score for each of the available games.

15. The method of claim 13 further comprising changing the automated selection to produce a new set of recommended games.

16. The method of claim 15 further comprising changing the personal game selection information used in the automated selection.

17. The method of claim 1 wherein the set of recommended games includes one of a video slots game, a video poker game, a video black jack game, a video pachinko game, a video card game, a video keno game, and a video game of chance.

18. A computer readable medium including instructions for offering a set of recommended games to a person using a gaming machine, the instructions comprising:

instructions for storing personal game selection information that is useful for selecting a game from multiple games for the person;

instructions for selecting the set of recommended games, from a set of available games, for the person using the personal game selection information; and

instructions for displaying the set of recommended games to the person on a video display associated with the gaming machine.

19. The computer readable medium of claim 18 wherein the instructions for selecting the set of recommended games includes an automated selection that uses the personal game selection information to produce the set of recommended games.

20. A method for selecting a set of recommended games for a person, the method comprising:

assembling game meta-data for a set of available games, the game meta-data referring to data that is useful for characterizing the game;

obtaining personal game selection information for the person related to the game meta-data; and

selecting a set of recommended games, from the set of available games, for the person using the personal game selection information and using the game meta-data for the set of available games.

21. The method of claim 20 wherein the personal game selection information is used to set a weight for each game meta-data that affects the relative relevance of each game meta-data for that person.

22. The method of claim 20 wherein the selection is automated given the game meta-data and the personal game selection information.

23. The method of claim 20 further comprising renewing the set of recommended games after the personal game selection information changes.

24. The method of claim 20 further comprising renewing the set of recommended games after the set of available games changes.

25. The method of claim 20 further comprising storing personal identification information that allows the person to be identified at a gaming machine.

26. The method of claim 25 wherein the personal identification information includes a personal tracking identification number or biometric information.

27. A server for use with a gaming machine network, the server comprising:

a memory designed or configured to store a) a set of available games, b) personal game selection information for a person that is useful for selecting a set of recommended games from the set of available games for the person, and c) a software application that selects the set of recommended games from the set of available games using the personal game selection information;

a logic device configured to execute the software application that selects the set of recommended games from the multiple games for the person using the personal game selection information; and

a communications interface for transmitting a list of the set of recommended games to an external device.

28. The server of claim 27 wherein the software application is configured to refresh the selection of the set of recommended games.

29. The server of claim 28 wherein the software application is configured to refresh the selection of the set of recommended games when new personal game selection information is received for the person.

30. The server of claim 28 wherein the software application is configured to refresh the selection of the set of recommended games on a timely basis.

31. The server of claim 28 wherein the memory is further configured to store identification for the person or biometric information for the person.

32. The server of claim 28 wherein the memory is further configured to store preview permission for a game for a person.

33. A gaming machine comprising:

a controller that is designed or configured to control one or more games played on the gaming machine and to request a set of recommended games for a person from a remote server;

a communications interface configured to communicate with the remote server;

a video device configured to display video data and display the set of recommended games; and

a memory that is designed or configured to store preferential game software that instructs the controller to request the set of recommended games for the person from the remote server when the person near the gaming machine.

34. The gaming machine of claim 33 wherein the memory is designed or configured to store preferential game software that instructs the controller to request the set of recommended games when the person is identified at or near the gaming machine.

35. The gaming machine of claim 33 further comprising a card reader configured to accept a card and read an identification for the person from the card.

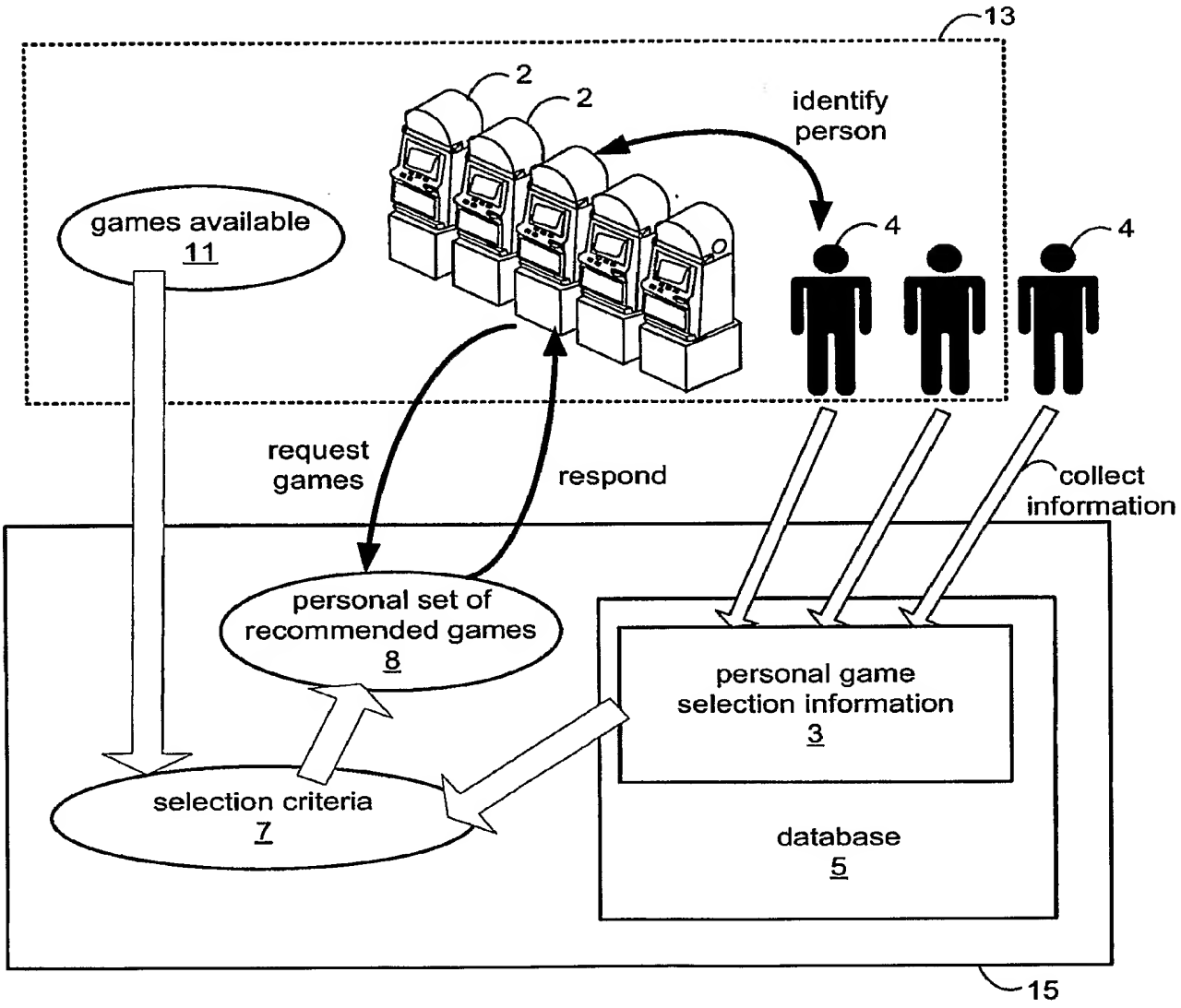
13
2
2
identify person
games available 11
4
4
request games
respond
collect information
personal set of recommended games 8
personal game selection information 3
selection criteria 7
database 5
15

FIG. 1

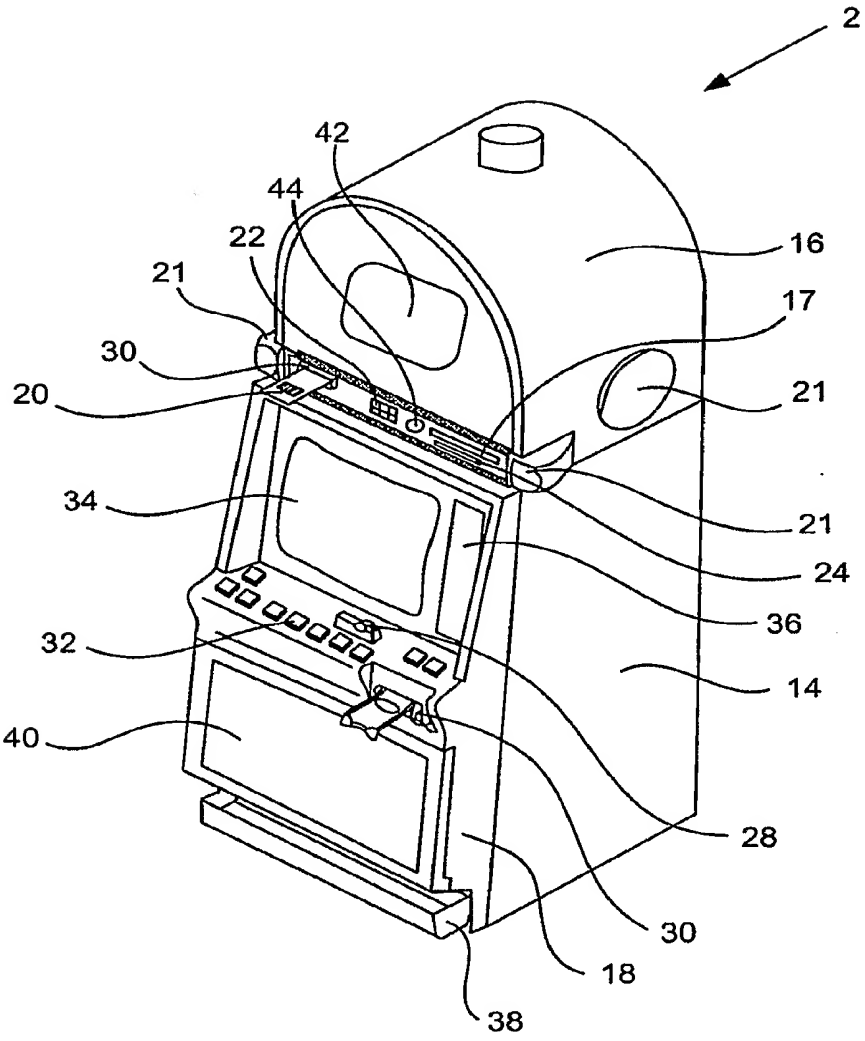

FIG. 2

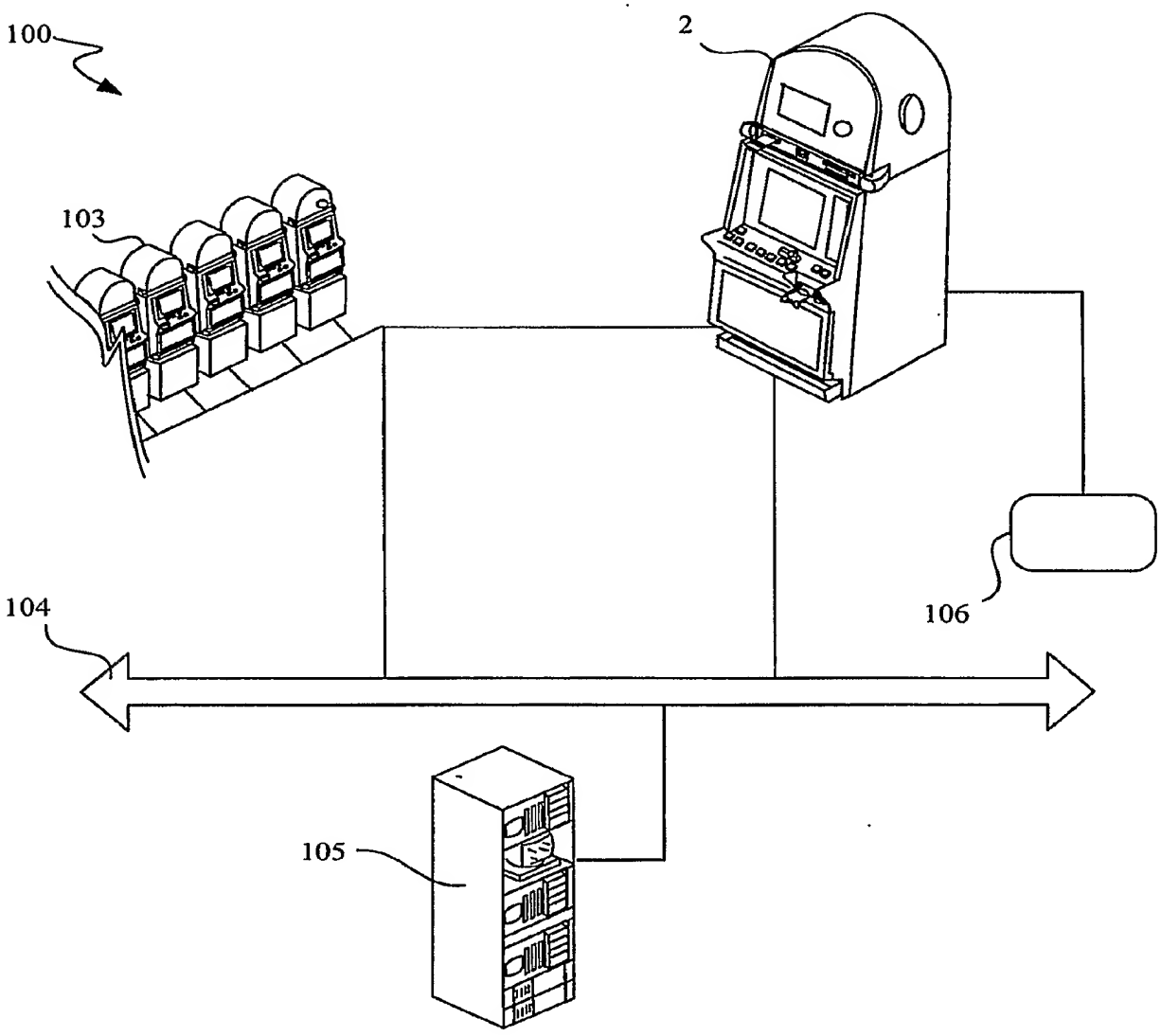

FIG. 3

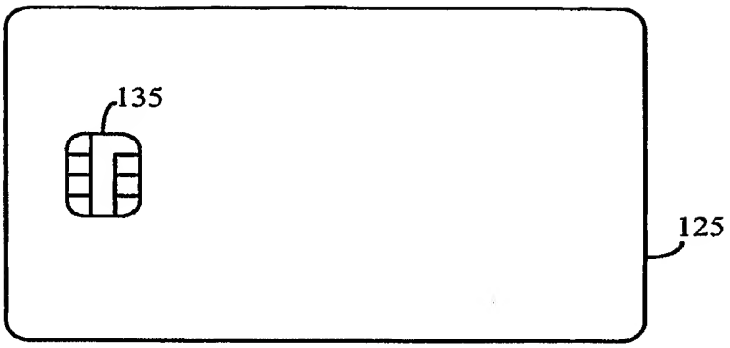

FIG. 4A

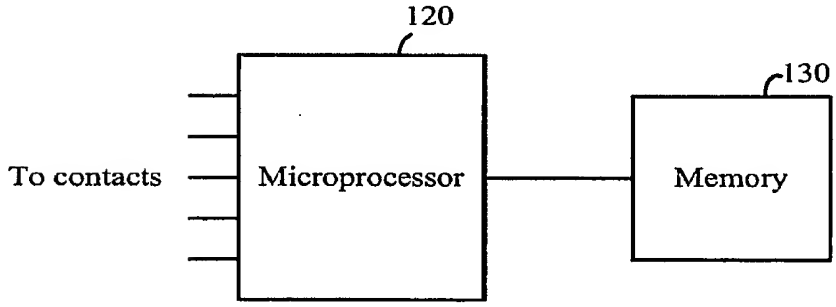

FIG. 4B

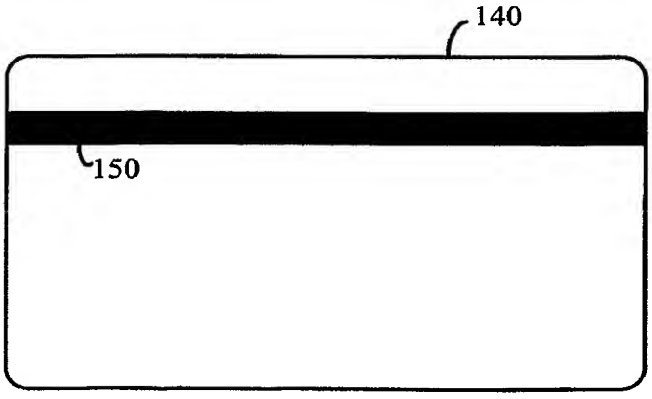

FIG. 4C

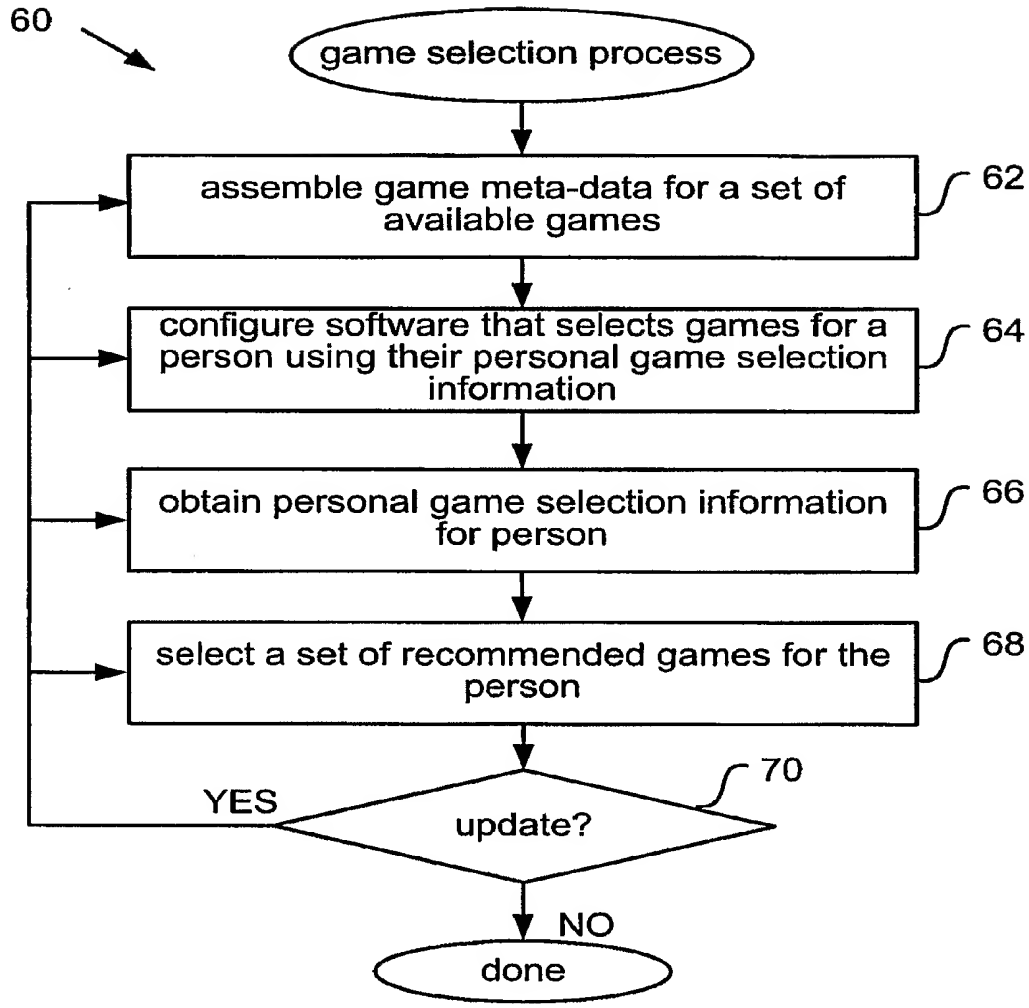
60
game selection process
assemble game meta-data for a set of available games
62
configure software that selects games for a person using their personal game selection information
64
obtain personal game selection information for person
66
select a set of recommended games for the person
68
update?
70
YES
NO
done

FIG. 5

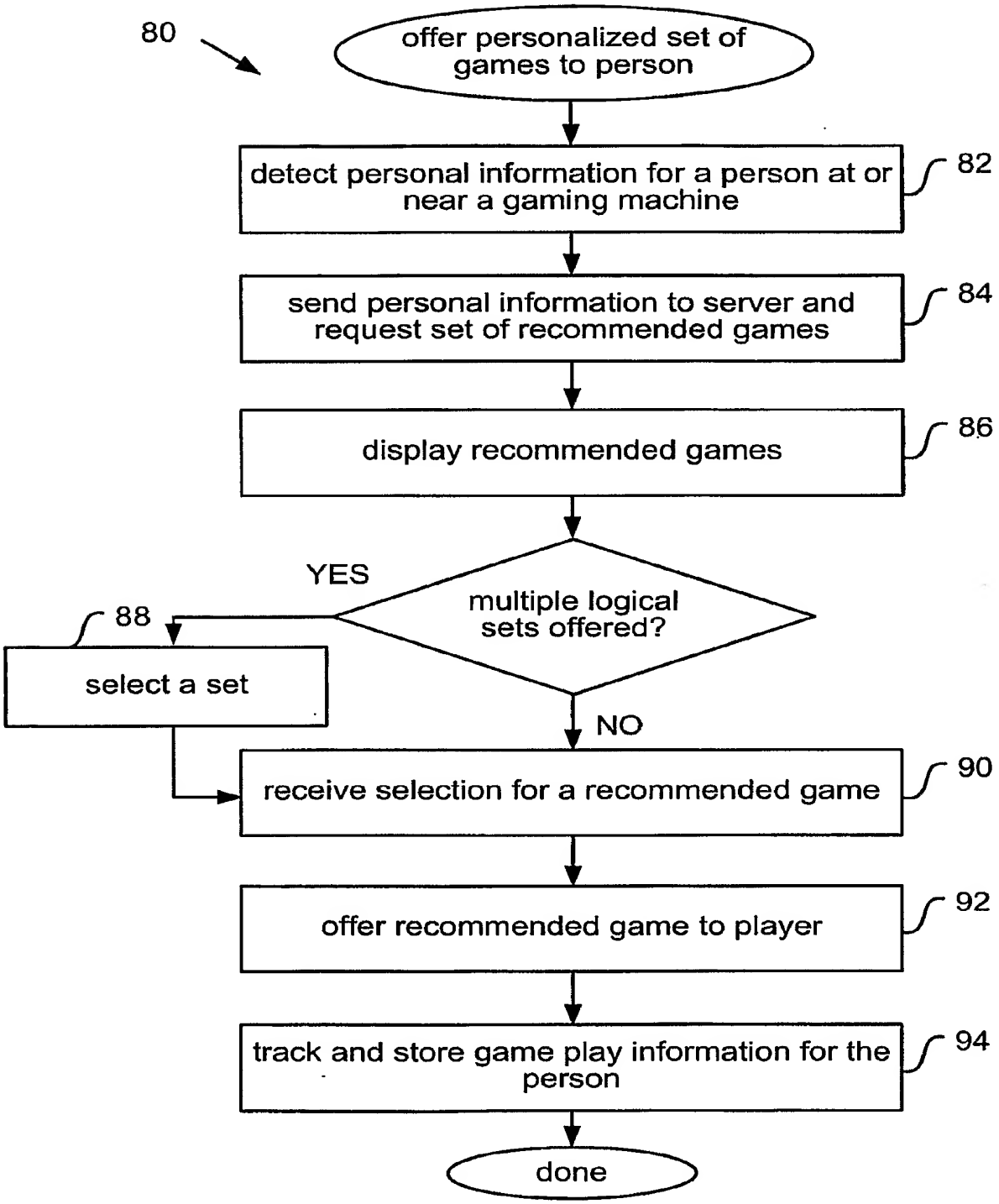
80
offer personalized set of games to person
detect personal information for a person at or near a gaming machine
82
send personal information to server and request set of recommended games
84
display recommended games
86
multiple logical sets offered?
YES
88
select a set
NO
receive selection for a recommended game
90
offer recommended game to player
92
track and store game play information for the person
94
done

FIG. 6

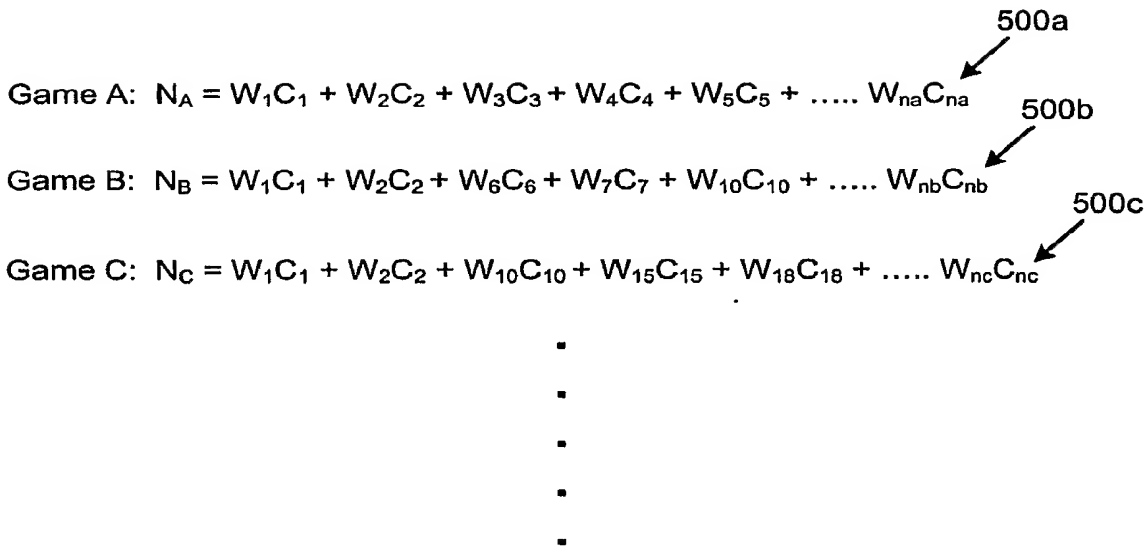
500a
Game A: $N_A = W_1C_1 + W_2C_2 + W_3C_3 + W_4C_4 + W_5C_5 + \ldots W_{na}C_{na}$
500b
Game B: $N_B = W_1C_1 + W_2C_2 + W_6C_6 + W_7C_7 + W_{10}C_{10} + \ldots W_{nb}C_{nb}$
500c
Game C: $N_C = W_1C_1 + W_2C_2 + W_{10}C_{10} + W_{15}C_{15} + W_{18}C_{18} + \ldots W_{nc}C_{nc}$

FIG. 7

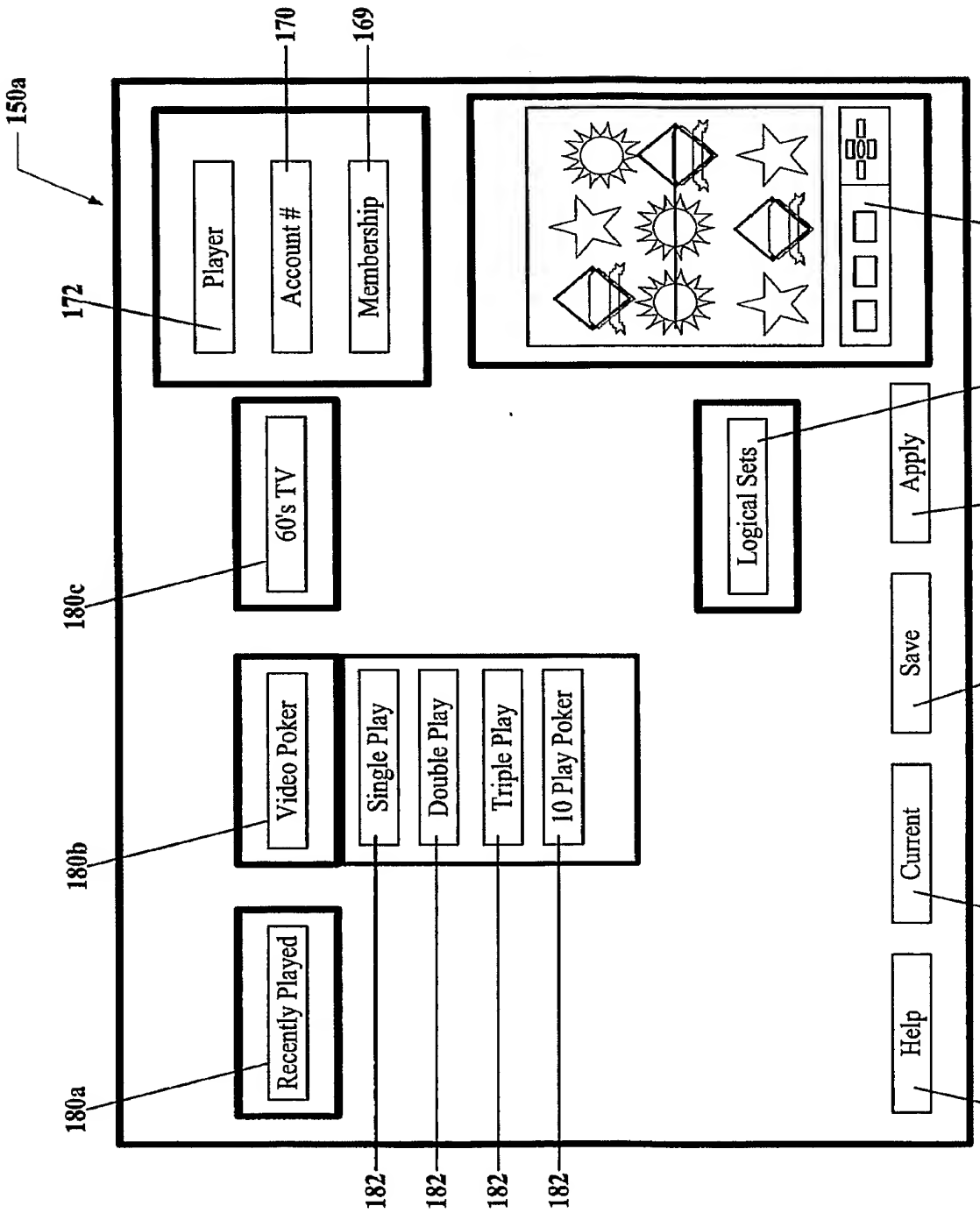
150a
170
169
Player
Account #
Membership
172
168
60's TV
180c
Logical Sets
184
Apply
167
Video Poker
180b
Single Play
Double Play
Triple Play
10 Play Poker
Save
164
Recently Played
180a
Current
161
Help
160
182
182
182
182

FIG. 8A

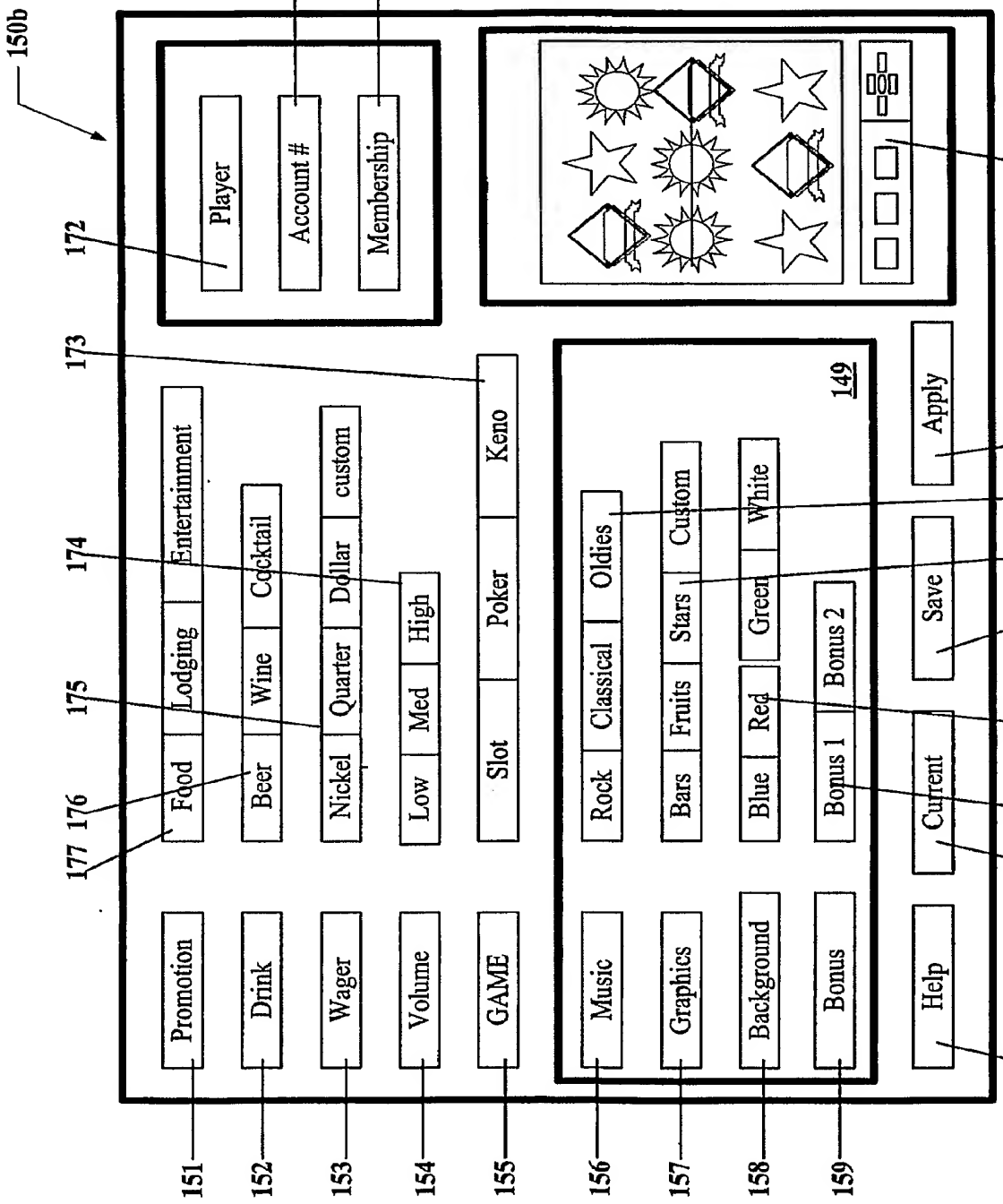
150b
Player
Account #
Membership
170
169
172
168
173
Keno
Poker
Slot
Entertainment
Lodging
Food
Cocktail
Wine
Beer
custom
Dollar
Quarter
Nickel
High
Med
Low
174
175
176
177
149
Oldies
Classical
Rock
Custom
Stars
Fruits
Bars
White
Green
Red
Blue
Bonus 2
Bonus 1
Apply
Save
Current
Help
Promotion
Drink
Wager
Volume
GAME
Music
Graphics
Background
Bonus
167
166
165
164
163
162
161
160
151
152
153
154
155
156
157
158
159

FIG. 8B

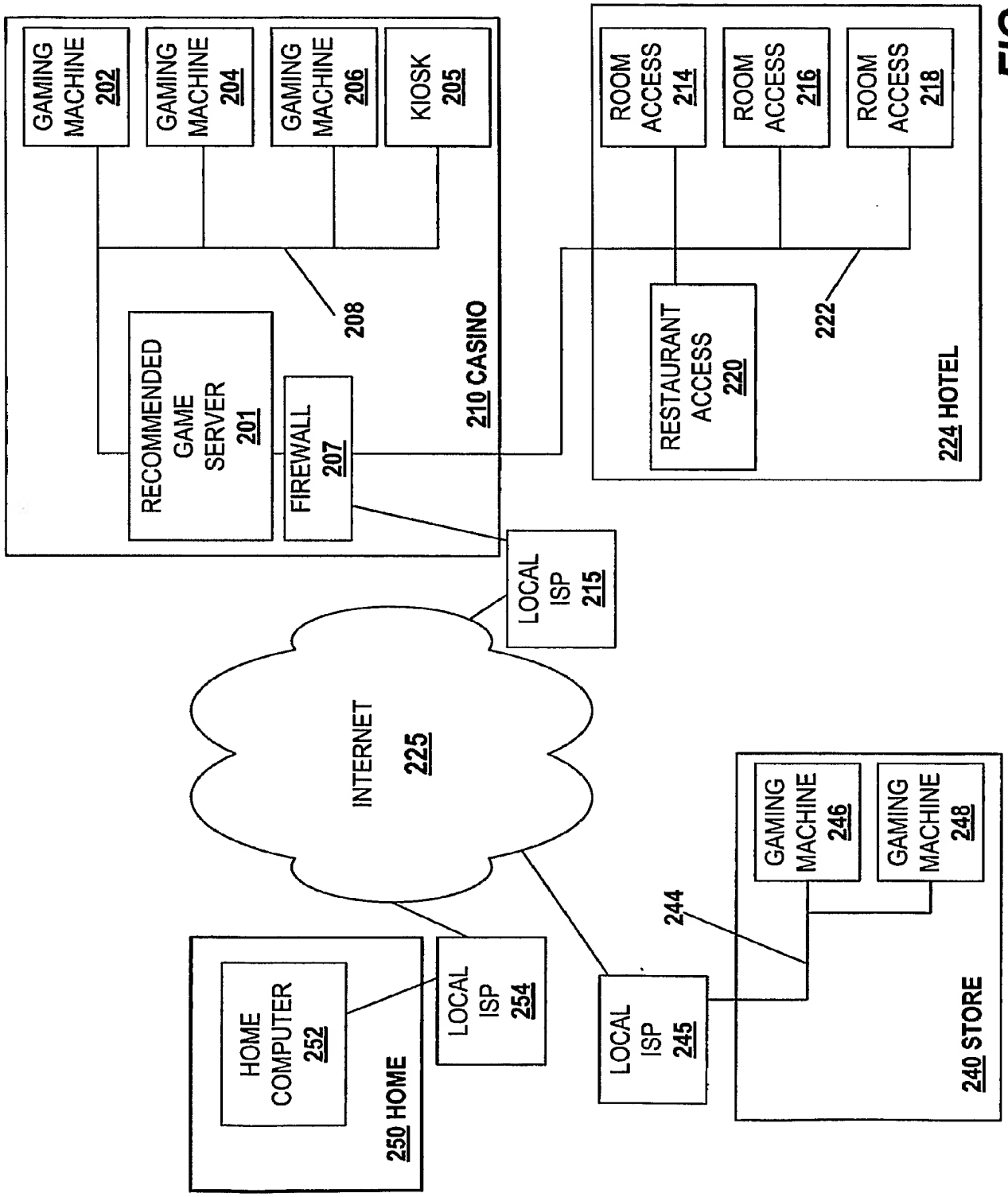
GAMING MACHINE 202
GAMING MACHINE 204
GAMING MACHINE 206
KIOSK 205
RECOMMENDED GAME SERVER 201
FIREWALL 207
208
210 CASINO
ROOM ACCESS 214
ROOM ACCESS 216
ROOM ACCESS 218
RESTAURANT ACCESS 220
222
224 HOTEL
LOCAL ISP 215
INTERNET 225
HOME COMPUTER 252
LOCAL ISP 254
250 HOME
LOCAL ISP 245
244
GAMING MACHINE 246
GAMING MACHINE 248
240 STORE

FIG. 9

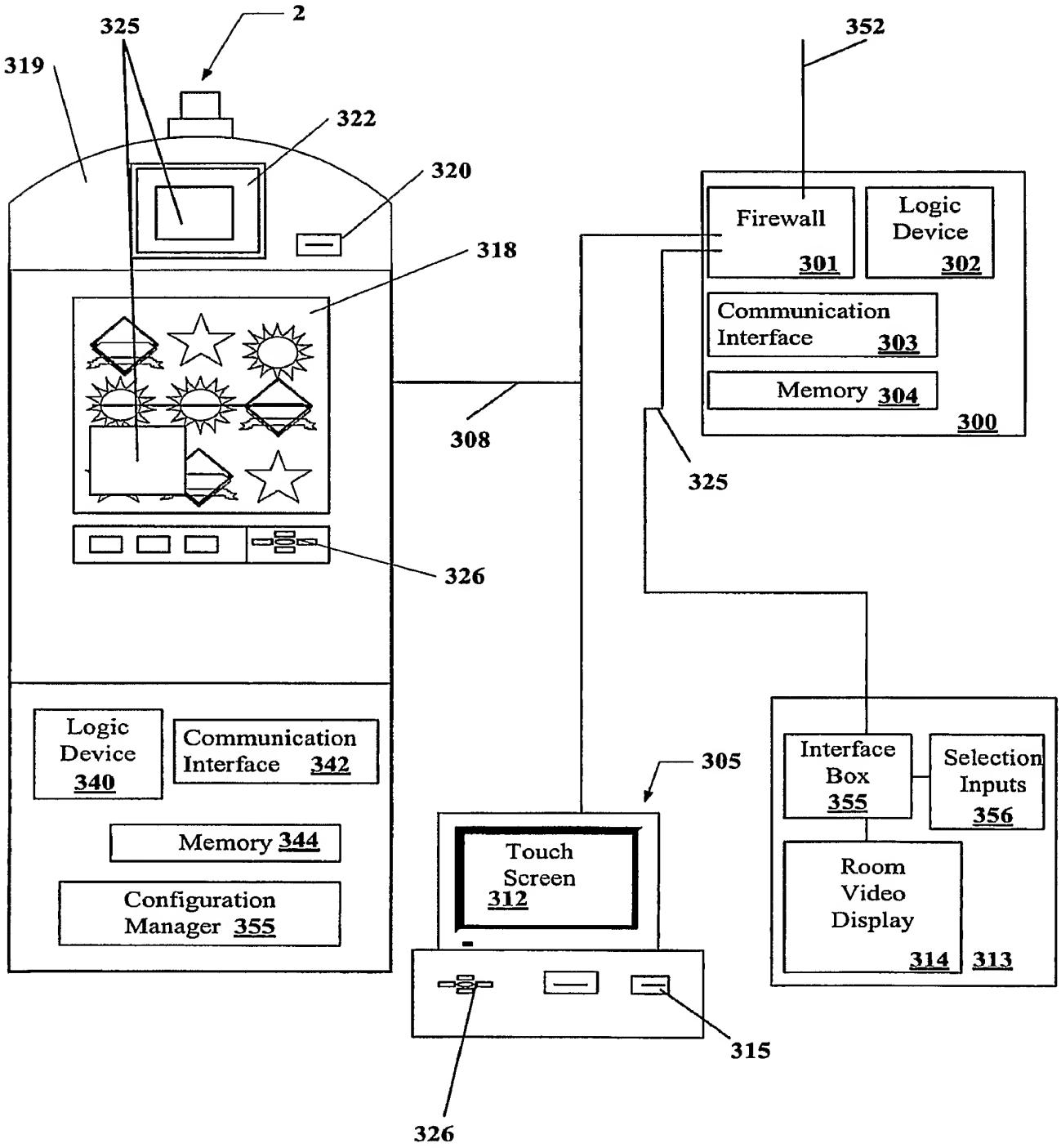
2
325
319
322
320
318
352
Firewall
301
Logic
Device
302
Communication
Interface
303
Memory 304
300
308
325
326
Logic
Device
340
Communication
Interface 342
Memory 344
Configuration
Manager 355
305
Touch
Screen
312
Interface
Box
355
Selection
Inputs
356
Room
Video
Display
314
313
315
326

FIG. 10

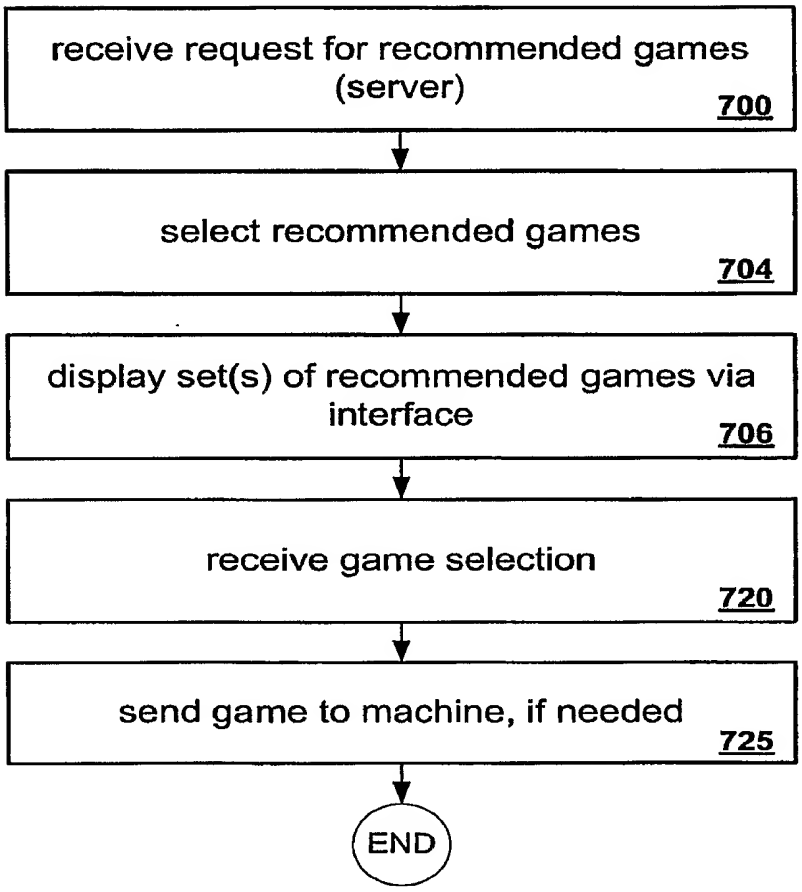
receive request for recommended games (server)
700
select recommended games
704
display set(s) of recommended games via interface
706
receive game selection
720
send game to machine, if needed
725
END

FIG. 11